

R-649-NYC

June 1971

RENTAL HOUSING
IN NEW YORK CITY
Volume II
THE DEMAND FOR SHELTER

Ira S. Lowry, Joseph S. DeSalvo
and Barbara M. Woodfill

THE
NEW YORK CITY
RAND
INSTITUTE

545 MADISON AVENUE NEW YORK NEW YORK 10022 (212) 758-2244

Rand

The New York City-Rand Institute is a nonprofit research institution founded, as its Articles of Incorporation state, "... primarily to conduct programs of scientific research and study, and provide reports and recommendations, relevant to the operations, planning or administration of the City of New York." The Institute was established in 1969 by the City of New York and The Rand Corporation as a center for the continuing application of scientific and analytic techniques to problems of urban life and local government. It is governed by a Board of Trustees appointed jointly by the City and Rand.

R-649-NYC

June 1971

RENTAL HOUSING IN NEW YORK CITY

Volume II

THE DEMAND FOR SHELTER

Ira S. Lowry, Joseph S. DeSalvo
and Barbara M. Woodfill

This study was sponsored by the City of New York
and by the New York City-Rand Institute. Its contents,
however, do not purport to represent the official
views or policy of the City of New York.

THE
NEW YORK CITY
RAND
INSTITUTE

545 MADISON AVENUE NEW YORK NEW YORK 10022 (212) 758-2244

Rand

AVERY ARCHITECTURAL AND FINE ARTS LIBRARY
GIFT OF SEYMOUR B. DURST OLD YORK LIBRARY

FOREWORD

The Demand for Shelter is a major contribution to understanding the dimensions of New York City's housing problems. A well-balanced study of the rental housing market, it describes the housing bargains that many tenants obtained under the City's former rent-control law, but also demonstrates the inability of many of the City's residents to afford the full costs of well-maintained housing. Early work on this study formed the basis for this Administration's development of proposals for changes in the City's rent-control law. In February 1970, the major findings were summarized in Vol. I, *Confronting the Crisis*, which had a considerable influence on the City Council deliberations leading to the passage of Local Law 30, signed by Mayor Lindsay in July 1970.

The chapters on population change and household formation, incomes and levels of living, and demand for housing provide clear insight into the implications of changing tenant characteristics for the utilization and support of the existing housing stock. The study suggests that the provision of new housing for all low-income families is inappropriate and probably impossible, given the City's large inventory of older housing and the enormous gap between the rent-paying capacity of many tenants and the full cost of building and operating new housing. The New York City—Rand Institute proposes an imaginative new concept of rent assistance that eschews traditional rent/income ratios in favor of a sliding scale based on disposable income, family size, and modest space and quality standards. Concluding that tenant poverty is the principal obstacle to maintaining and improving the quality of much of the existing housing stock, The New York City—Rand Institute presents the rationale for a rent-assistance program whose net public costs would run about 400 million annually, and, together with the existing programs, would enable all low-income families to afford a low-to-moderate standard of housing.

While the precise standards and costs may be subject to revision and a program of this magnitude may be inappropriate at a time of State and City budget retrenchment, I believe that Rand correctly identifies the need for massive housing assistance to low-income tenants in New York and in other urban centers. Until

national priorities are reordered to alleviate dramatically the poverty documented in this volume, I foresee a continuation of the distressing housing conditions that plague our major population centers.

ALBERT A. WALSH
Administrator
Housing and Development Administration
City of New York

PREFACE

This volume of our series on *Rental Housing in New York City* is a study of the "demand" side of the City's rental housing market. Undertaken at the request of the City's Housing and Development Administration, it is designed primarily to shed light on the ability of the City's renter households to pay for adequate housing. We have striven for dispassionate and factual analysis of complex issues about which feelings run high—and there is no escaping some subjective judgments. We hope we have succeeded in providing a helpful framework for what we expect to be a continuing dialogue concerning the regulation of rents and the targeting of special provisions for relief and assistance.

The first round of this dialogue was closed in June 1970, when the City Council passed the first major reform of the City's rent control law since rent control was imposed as a wartime emergency measure in 1943. The Council was persuaded, by abundant evidence, that the effectiveness of the law in limiting rent increases had led to a disastrous cost-rent squeeze on the owners of rental property. Under the new law, ceiling rents are to be gradually raised to levels that reflect the current costs of providing rental housing, including a fair return to the owners of well-maintained buildings. However, temporary exemption from these increases was provided for low-income households headed by elderly persons.

As the scheduled rent increases take effect, the concerns which this exemption provision reflects will recur. The City will be forced continually to balance the budgetary problems of renter families against the revenues needed by building owners, the public interest in maintaining minimum standards of housing quality, and the fiscal capacity of the City to help where help is needed. Hence the present study.

Volume I of this series was published in February 1970 under the title, *Confronting the Crisis*. It summarizes our findings as to the perilous state of the City's rental housing market and the effects of existing City programs. It sets forth broad strategic alternatives for housing betterment and suggests criteria against which these alternatives should be assessed. Finally, it outlines some policy and program proposals that seemed to us to meet these criteria.

Volume I drew heavily on research to be reported in detail here and in subsequent volumes. The sequence of publication reflects a common pattern in

policy-related research: Well in advance of the date on which the researcher has tied up all the loose ends of his analysis, his most important findings are usually clear. Subsequent increments of data and refinements of method may temper, but are unlikely substantially to alter, the principal conclusions. Drawing on a large body of research completed or in progress, we felt able to clarify important issues of housing policy on which decisions had to be made by the Administration and the City Council in the Spring of 1970. To be useful, our report had to be timely; to be read, it had to be succinct. Volume I was composed and published to meet these tests.

Although Volume I, closely examined, provides hard data in support of every major conclusion, the sources of these data could not be thoroughly documented in that format nor could they be presented in rich enough detail to quiet all concern about alternative interpretations of the facts. In this volume and in those to follow, we provide that documentation and that detail and also explore less central but still important issues not covered in Volume I. Thus we mean the present volume to be a durable and comprehensive source of authoritative information concerning the "demand side" of New York City's rental housing market.

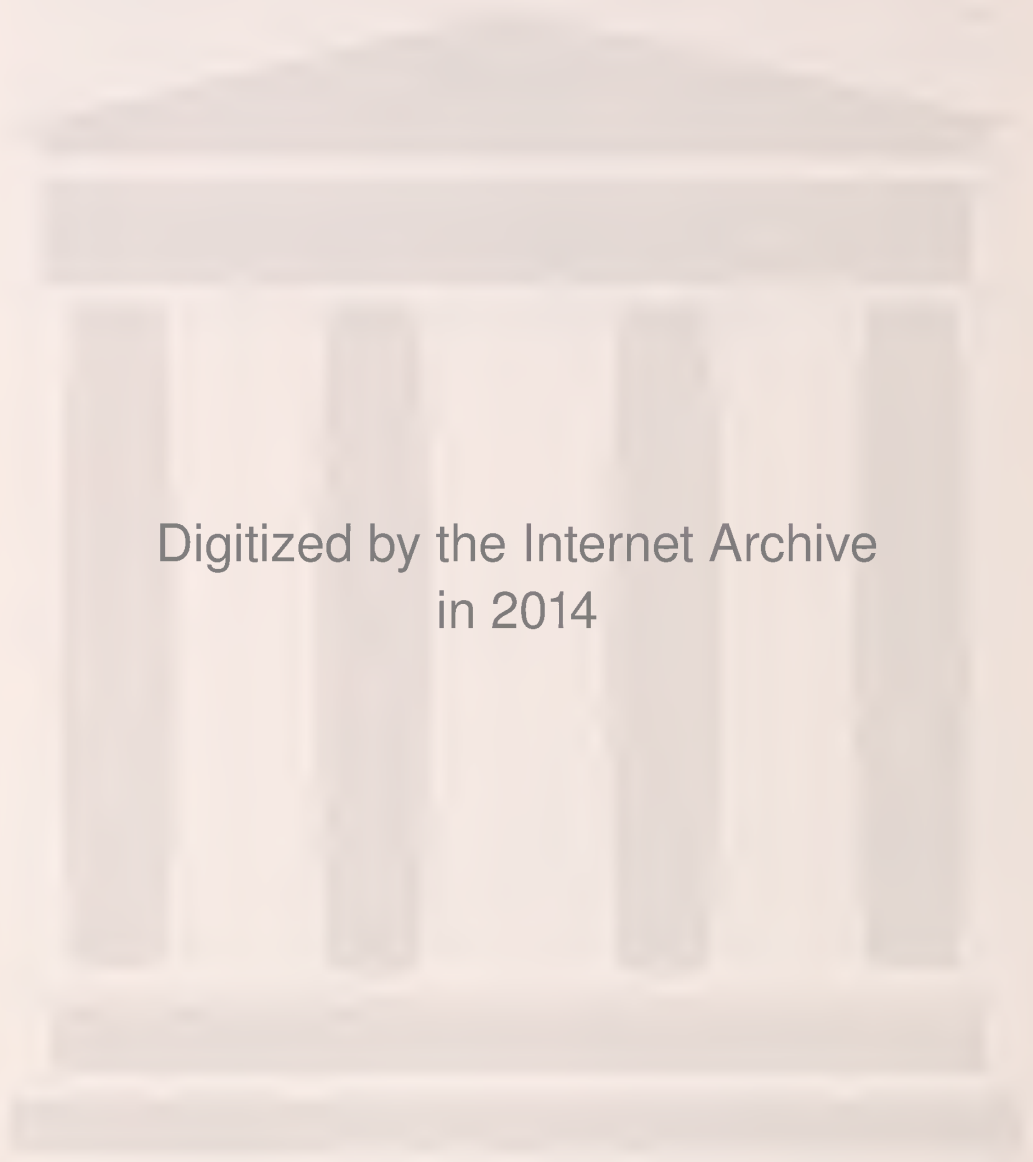
This is one of a series of studies undertaken by the staffs of The Office of Programs and Policies in the Housing and Development Administration, McKinsey & Company, and The New York City-Rand Institute. The responsibility for research and writing varies from study to study. The present volume is based mostly on analysis done by the staff of The New York City-Rand Institute, although it depends heavily on data assembled by HDA and the Bureau of the Budget, as well as by other organizations and public agencies. A particularly valuable resource was the New York City Housing and Vacancy Survey of 1968, commissioned by the Office of Rent Control in HDA and executed by the U.S. Bureau of the Census. Another was a series of tabulations of data on welfare clients prepared by the Bureau of the Budget from records of the Department of Social Services. Still another was the published work of the Community Council of Greater New York relating to family budgets.

The organization and coverage of this volume was planned by Ira S. Lowry, who also wrote most of the final draft. Joseph S. DeSalvo conceived and carried out the statistical analyses of factors influencing rent expenditures and the market value of rent-controlled housing that are central to Ch. IV and Ch. V, respectively; he also supervised many of the machine tabulations of data from the 1968 Housing and Vacancy Survey. Barbara M. Woodfill assembled and analyzed most of the remaining statistical data in the volume, developing the methods for meshing and reconciling data from disparate sources and carrying through long sequences of calculations needed to isolate information of particular interest. She also planned many of the graphic layouts.

Other colleagues from the Institute and The Rand Corporation made substantial contributions. William Allen provided timely and careful computer programming for tabulations and statistical analyses. Doris Dong prepared and patiently revised the graphics to meet our changing perceptions of what was needed. Geraldine Jaimovich typed several drafts of the manuscript with speed and accuracy. The entire manuscript was reviewed by Jan Chaiken, Elizabeth Durbin, and Karen Eisenstadt, all of whom made many helpful suggestions.

Within the Office of Programs and Policies of HDA, we are particularly indebted to Arthur Spiegel, formerly Director of Planning, Programming, and Budgeting Systems, and Keith Wheelock, Chief of the Division of Programs and Policy Research, for advice and encouragement. Mrs. Barbara Cohn of the Research Division of the Office of Rent Control helped us at an early stage with the complexities of the Housing and Vacancy Survey. Joan Ransahoff, then with the Bureau of the Budget, provided us with tabulations and explanations of the data on welfare housing and rent expenditures compiled under her supervision. Evelyn Mann and Adolf Oppenheimer of the Department of City Planning's Population Analysis Section provided helpful data on certain aspects of population change in the City.

Although the contents of this volume were naturally reviewed by representatives of the City's Housing and Development Administration prior to publication, that review does not imply unqualified endorsement of our analysis; in matters as complex as those discussed in the following pages, there are bound to be differences of opinion or emphasis. We accept full responsibility for the assumptions underlying our analysis and for the findings of fact, interpretations, and inferences presented in this volume; our study does not purport to represent the official views or policies of the Housing and Development Administration or of the City of New York.



Digitized by the Internet Archive
in 2014

<https://archive.org/details/rentalhousinginn00durs>

SUMMARY

This is a study of the demand for rental housing in New York City, intended primarily to shed light on the ability of the City's renter households to pay for adequate housing. It traces recent changes in the number and characteristics of the City's households, their living arrangements, and their incomes, with special attention to those who live in rental housing. It examines the changing pattern of rent expenditures by these households and analyzes the variations in rent expenditures among different types of households and in the City's principal housing submarkets. It shows who has benefited from the City's program of rent control and how large these benefits have been. It also shows how the system of rent control has affected the pattern of housing consumption and rent expenditures. Finally, it attempts to distinguish which among the City's renter households are unable to afford adequate housing without some form of assistance and to estimate how much assistance these households need.

Our analysis covers the period from 1950 to 1970, with particular emphasis on conditions in 1968, a year for which especially good data are available. In 1968, about two-thirds of the City's inventory of privately owned rental housing operated under a system of rent control essentially unchanged since its imposition in 1943 as a wartime emergency measure. Thus, the patterns of rent expenditure and the characteristics of the rental housing stock described in this volume reflect the cumulative consequences, both good and bad, of many years of this system of rent regulation.

In 1969, most of the rental housing constructed after 1946, and theretofore exempt from rent controls, was placed under a limited form of industry-administered rent regulation. In 1970, the basic rent control law was amended to provide a radically different method for determining ceiling rents, a method intended to correct many of the troublesome inequities of the earlier law. The data on which our analysis is based do not reflect this new legislation; rather, they describe conditions immediately prior to its enactment, thus providing a benchmark against which the effects of the new laws can be appraised a few years hence.

Our principal findings are summarized below.

POPULATION CHANGES AND HOUSEHOLD FORMATION

The City's population has changed very little in size over the past two decades and we see no reason to expect much growth in the near future. Growth in the demand for housing units, therefore, depends primarily on a continuation of the historic trend toward separate living arrangements, particularly for individuals and couples past middle age. Market demand for larger or better units depends primarily on continued growth of household incomes relative to the price of housing.

Despite the lack of growth in total population, the number of separate households in the City grew from 2.4 million in 1950 to 2.8 million in 1970. The increase consists entirely of one- and two-person households, which now account for about 55 percent of the total. Most of these consist of individuals or couples past middle age. At least 70 percent of those living alone are over 45 and at least a third are over 65; nearly 60 percent are women. Young single persons concentrate in Manhattan, where their high visibility gives a very misleading impression of their numbers; City-wide, only about 4 percent of all persons living alone are under 25.

The number of larger households (three or more persons) has decreased by 200,000 since 1950, most of the decrease consisting of three- and four-person households. There are some indications that during the past few years, households of five or more persons have been increasing in numbers due to the prevalence of large families among the City's growing population of blacks and Puerto Ricans.

The trend toward separate living arrangements for single persons and elderly couples reflects increasing prosperity and simplified methods of housekeeping. It accounts for New York City's continued housing shortage despite an added 414,000 housing units between 1950 and 1968. During this interval, the City's residents absorbed 1.8 million additional rooms with no significant change in population, for a 19-percent increase in space consumption per capita.

We do not see any reason to expect substantial growth in New York City's population during the next few years. Consequently, we envisage a demand for about 15,000 to 25,000 housing units annually, net of replacement, to accommodate household formation by persons who prefer and are financially able to live apart from relatives. Production above that number will necessarily compete with existing housing, much of which could certainly stand replacement.

Within a relatively constant total population, the City has experienced an immense turnover, primarily due to in- and outmigration, the most striking consequence of which has been a rapid change in the City's ethnic composition. The City has been losing white residents by net outmigration since at least 1940. During the 1950s, the loss amounted to 1.2 million persons, and the rate of loss has since increased. These losses have been partially compensated by large volumes of black and Puerto Rican immigration. These two ethnic groups now comprise a third of the City's population, and we expect their numbers to increase. Consequently, there is every reason to expect peripheral expansion of existing black and Puerto Rican ghettos, with attendant difficulties for the housing markets of adjoining neighborhoods.

Net immigration of nonwhites and Puerto Ricans, supplemented by their high birth rates, has increased the combined share of these two ethnic groups in the City's population from 13 percent in 1950 to about 33 percent in 1970. Most of the newcomers have settled in the Bronx and Brooklyn, replacing whites whose exodus from these boroughs is at least partially a response to the presence of the newcomers. Manhattan's nonwhite and Puerto Rican populations have grown very little, although the white population has declined substantially as commercial and institutional expansion has reduced the island's housing stock. Queens and Richmond still have few nonwhite and Puerto Rican residents.

During the past 20 years, New York has shared with most of the nation's central cities the trauma of ethnic turnover, at best an uncomfortable process and at worst an ugly one. Peripheral expansion of black and Puerto Rican ghettos usually frightens the residents of adjoining neighborhoods into resistance or flight. Between 1955 and 1960, over 400,000 whites moved from the City to adjoining suburbs, the reverse flow amounting to only 55,000. Despite the efforts of civic-minded institutions and the City government itself, a changing neighborhood seldom stabilizes until ethnic succession is virtually complete.

In the process, the neighborhood's housing often suffers severely from damage and neglect, the consequences of financially unsound transactions, low rent-paying ability of new tenants, transplantation of rural habits of life to a high-density environment, landlord-tenant hostility, and the withdrawal of institutional financing.

Although the streams of nonwhite and Puerto Rican immigration may shrink, the current rate of their natural increase alone would cause these two ethnic groups to grow in numbers by 25 percent over the next decade. The trauma of neighborhood turnover will thus continue throughout the 1970s.

INCOMES AND LEVELS OF LIVING

New Yorkers who work for a living are quite prosperous, though no more so than their counterparts in other large cities. Among families of three or more persons (almost all of which have one or more employed members), well over 40 percent reported 1968 incomes over \$10,000. Among unrelated individuals and two-person families, there are many who rely primarily on Social Security, pensions, or public assistance, and these comprise most of the City's low-income population. Thus, half of all unrelated individuals reported 1968 incomes under \$3,380 and a fourth reported incomes under \$1,620.

In economic terms, the decade of the 1950s might be called a Golden Age for New Yorkers; the median *real* income (money income adjusted for changes in purchasing power) for families increased by 44 percent and the median for unrelated individuals increased by 35 percent. Although money incomes continued to rise rapidly in the 1960s, most of the increase was offset by higher consumer prices.

Between 1960 and 1969, the median real income of families increased no more than 11 percent and perhaps as little as 6 percent. Changes for unrelated individuals appear to have been of comparable magnitude.

A major event of this decade has been the expansion of the City's program of public assistance, from 324,000 persons in 1960 to over a million in 1969, when some 13 percent of the City's residents were welfare clients. About 114,000 of these either lived alone or as members of a household containing no other welfare clients. The other 900,000-odd welfare clients were grouped into about 200,000 households, most of which consisted of an adult female with one or more dependent children. Welfare allowances typically amounted to about \$1,650 for a single person and \$600 for each additional person, placing almost all welfare-assisted households among the lowest fourth of income recipients within each household size. Thus, the growth of the welfare program has had little direct effect on the median income, serving mostly to raise individuals and families from indigence to a subsistence level. It has, perhaps, attracted poor immigrants, many of whom depend on public assistance for support during their first few years of residence.

In 1968-1969, welfare households accounted for about 37 percent of all households in the lowest quartile of the income distribution. Many of those not then enrolled reported incomes below public assistance standards; if they were otherwise eligible and chose to apply, the welfare caseload could easily increase by 50 to 80 percent, mostly in the form of single persons and two-person families.

Over three-fourths of the City's 2.8 million households live in rental quarters. Most low-income households and almost all of those on welfare are renters, so that the median income for renters is substantially lower than the median for homeowners. When the reported incomes of renter households of each size are adjusted to level-of-living equivalents, two-person renter households appear to be better off as a group than any other size. One-person renter households, whose dollar incomes are typically low, appear much more prosperous as a group when their limited budgetary responsibilities are considered. Because one- and two-person renter households are so numerous, they account for most of the City's low-income renter households and also most of its high-income renter households.

About 76 percent of the City's 2.8 million households live in rental quarters, the proportion rising to 89 percent for one-person households and remaining above 60 percent for even the largest household sizes. Most low-income households and almost all of those on welfare are renters, so that the incomes of renters tend to be substantially lower than the incomes of owners. However, renters outnumber owners at all levels of income, and at least 20 percent of all renters had 1967 incomes in excess of \$10,000.

This volume is concerned mainly with the City's 2.1 million renter households, of which 60 percent consist of one or two persons. Among one-person renter households, three-fourths reported 1967 incomes below \$6,580, with a median value of \$4,100. For those of larger size, the upper quartile of income varied from

\$8,550 to \$10,070, and the median varied from \$6,000 to \$7,300, the highest values in both cases being reported by households of four persons.

When the reported incomes of households of each size are adjusted to level-of-living equivalents for a "reference" household of four persons, the median reference income for all renter households is \$7,800; in other words, we estimate that half of all renters could afford to live better than a four-person household with that dollar income in 1968, and half could not. In these terms, two-person households appear to be better off as a group than any other size, and the median reference income declines sharply with household size. One-person households, whose dollar incomes are typically low, appear much more prosperous as a group when their limited budgetary responsibilities are thus taken into account. However, because one- and two-person renter households are so numerous, they still account for 60 percent of all renter households in the lowest quartile of the reference income distribution (below \$4,600), as well as 70 percent of those in the highest quartile (above \$12,000).

RENT EXPENDITURES AND THEIR DETERMINANTS

Since 1950, both the rent expenditures and the incomes of renter households have nearly doubled. Despite a substantial increase in space consumption per capita, the distribution of rent/income ratios for self-supporting households has not significantly shifted in the past two decades, half of them spending less than 19 percent of their incomes for rent and utilities combined. A much higher fraction of the typical welfare allowance goes for rent, and the growth in the welfare rolls accounts for an upward shift in the median rent/income ratio since 1960.

Between 1950 and 1968, the median gross rent per unit increased by 96 percent (from \$49 to \$96 per month) and the median renter income increased by 80 percent (from \$3,264 to \$5,885). Through 1960, changes in rents and incomes proceeded at about the same pace, so that the median rent/income ratio was about the same in 1960 as in 1950. Between 1960 and 1968, however, this ratio rose from about .19 to somewhere between .20 and .21.

In 1968, a fourth of all renter households paid less than 15 percent of their incomes for rent, about half paid between 15 and 30 percent, and about a fourth paid more than 30 percent. A large proportion of those with high rent/income ratios were welfare clients whose rents are paid by the Department of Social Services. When they are excluded from the distribution, the median rent/income ratio drops to .19, and we find about 70 percent of all nonwelfare renters with rent/income ratios below .25. This still leaves some 538,000 nonwelfare households paying more than a fourth of their incomes for rent. Not all of these are low-income families, but we estimate that about 375,000 of them had annual incomes below \$5000; about 145,000 had incomes between \$5,000 and \$10,000, and about 20,000 had incomes of \$10,000 or more.

Most of the variation in rent expenditures among households is attributable to income and to the submarket (location and control status) in which housing is found. The age, sex, and ethnic background of the household head and the size of his family have only slight influences on rent expenditures among households of comparable incomes who have found housing in the same submarket, and otherwise comparable households spend quite different amounts in different submarkets. High rent/income ratios are characteristic only of very poor households (many of whom are welfare clients) and of white households with low-to-moderate incomes living in uncontrolled housing, especially in Manhattan.

Distinguishing four major submarkets for housing in New York City—Manhattan controlled, Manhattan uncontrolled, non-Manhattan controlled, and non-Manhattan uncontrolled—we were able, by multiple regression analysis, to isolate the effects on rent expenditures of household income and other characteristics from the effects of price differences among the submarkets in which housing was sought or found. Families choosing a particular submarket adjust both their housing budgets and the type and quality of housing they consume to fit the price structure of that market.

Although other household characteristics, particularly the sex and ethnic background of the household head, account for some differences in the pattern of housing expenditures in each submarket, income is the variable of greatest importance. Outside Manhattan, differences in household income account for 81 percent of the observed variance in rent/income ratios for tenants of both controlled and uncontrolled housing. In Manhattan, the corresponding figures are 62 percent for controlled housing and 48 percent for uncontrolled housing. Once the four submarkets are distinguished, inclusion of variables other than income does not add much to the explanatory power of the model in any submarket except Manhattan uncontrolled housing, where another 8 percent of the variance is explained by household characteristics other than income, primarily the ethnic background of the household head.

Of the four basic household types distinguished in our analysis, families headed by white males are the most numerous among renter households in New York City, accounting for almost 60 percent of the total. Those living in controlled housing, whether in Manhattan or elsewhere, typically have rent/income ratios that are quite low by traditional standards, tending to exceed .25 only at incomes below \$4,000. At incomes of \$7,000 or more, the typical rent/income ratio for such households is less than .20. Rent/income ratios for households with these incomes but headed by nonwhites and Puerto Ricans are typically lower than those cited above.

High rent/income ratios are in fact characteristic only of very poor households and of white households with low-to-moderate incomes living in uncontrolled housing, especially in Manhattan. Among the poor, many are welfare clients whose rent allowances are set independently of their allowances for other consumption goods; for these cases, a high rent/income ratio is not a sign that the family is depriving itself of food or clothing in order to pay for shelter.

The high rent/income ratios borne by white residents of uncontrolled Manhattan apartments could be avoided by these families if they were willing to move to one of the outlying boroughs; their counterparts in uncontrolled housing outside Manhattan pay about half as much in rent. Those who choose to pay the stiff Manhattan premium presumably consider the extra rent outlay a reasonable price to pay for living in the Manhattan milieu or to avoid the out-of-pocket costs and rigors of commuting.

RENT CONTROL AND THE DEMAND FOR HOUSING

As a device for protecting the budgets of the disadvantaged, rent control is poorly targeted; no more than 55 percent of all rent-controlled units are occupied by households who could reasonably be described as poor. In 1968, the poor and prosperous alike reaped substantial advantages from controlled tenancy, paying on average about \$650 a year less than the market value of the housing they occupied, with the greater benefits accruing to the more prosperous tenants.

While rent control provides budgetary protection for groups that most people agree have special need for such protection—the poor, the elderly, households headed by females, and members of unassimilated minority groups—it is badly targeted in the sense that many occupants of rent-controlled apartments do not belong to these groups, and many families that do belong live in uncontrolled rather than controlled housing. By one fairly generous definition of poverty, about 80 percent of the poor live in controlled housing, but about 45 percent of those who live in controlled housing were not poor.

Despite the generally lower quality of controlled housing, it is a substantial bargain to its tenants in the sense that the rents they pay are typically well below the rents that their housing could command in an unregulated market. We estimate that the total annual benefit to tenants of rent-controlled housing in 1968 was roughly \$800 million, an average of \$650 per family. These benefits derived in part from revenue foregone by building owners, in part from real estate taxes foregone by the City. The benefits were larger for tenants of post-1929 multiple dwellings, especially those located in Manhattan.

Perhaps the clearest effect of rent control on housing demand has been to modify the relative advantages of living in Manhattan and in the outlying boroughs. Rent-controlled housing in Manhattan is a superlative bargain for most of the 387,000 families who occupy it. On average, they paid about \$1,200 less in 1968 than their housing would have commanded in an unregulated market.

It is often argued that rent control results in a serious misallocation of housing, with small families occupying larger apartments than they otherwise would.

Although it is true that small households are more likely to occupy large controlled apartments than large uncontrolled apartments, this fact can be as easily attributed to the relative scarcity of small controlled apartments as to the relatively low rents of large ones; we do not find much evidence that "misallocation" of housing in this sense is greater in the controlled than in the uncontrolled sector of the housing stock.

We do find evidence that many tenants of controlled housing accept lower standards of maintenance, services, and building security than they are willing to pay for, and we suspect that the mechanics of rent control tend to prevent them from reaching bargains with their landlords that would be beneficial to both parties.

If tenants of rent-controlled apartments were to pay the full market rents of the dwellings they occupy, they would, on average, be paying about the same as their counterparts (with respect to income, family characteristics, and location) who live in uncontrolled housing. The implication is that tenants of controlled housing consume neither substantially more nor substantially less housing than similar families who live in uncontrolled housing; the principal difference is that the "controlled" tenants pay less than the market value of the housing they occupy.

Taking into account the age, sex, and ethnic backgrounds of heads of households, their incomes and family sizes, and the location of their housing, we estimate that tenants of controlled housing could have paid an average of \$50 more in monthly rent in 1968 without exceeding either the rent expenditures of similar families in uncontrolled housing or the market value of the controlled housing they presently occupy. These rent differences were less than \$40 for families with incomes below \$5,000, rising to \$100 or more for families with incomes over \$15,000.

We do not argue that the rents paid by tenants of uncontrolled housing were easily managed; those with low incomes may have been badly straining their budgets. Nor do we argue that the quality of controlled housing—which included 89 percent of the units in Old-Law tenements and 95 percent of the units in New-Law tenements—was typically as high as that of uncontrolled housing. However, tenants of obsolete and poorly maintained controlled housing typically had more rooms per person than did tenants of newer uncontrolled housing, trading off quality for space. Our point is simply that the division of New York City's housing market into controlled and uncontrolled sectors has resulted in highly unequal treatment of families with similar claims to public consideration.

RENT-PAYING ABILITY AND HOUSING COSTS

Existing programs of housing assistance set maximum incomes for participation and establish minimum tenant contributions toward the cost of the housing offered by the program, usually in the form of minimum rent/income ratios. These

programs vary widely in the quality of housing offered, in maximum incomes for participation, and in the proportions of full cost contributed by the tenants. The differences among programs no doubt reflect a variety of program purposes as well as differing judgments of need by various legislative bodies; in any case, we are unable to discern a logical pattern among these programs with respect to the relationship between tenant rent-payments and tenant incomes.

Ability to pay for housing is often determined by traditional rules of thumb in the form of maximum rent/income ratios, the most hallowed of which is that a family can afford to pay a fourth of its gross income for housing. This simple rule is strikingly inequitable in its impact on family budgets because it takes no account of large variations in disposable income among families of different sizes and among families whose incomes come from different sources, variations due to the structure of income tax laws and to the work-related expenses of employed family members. Thus, a given gross income leaves much less disposable income for a couple living on the taxable earnings of the husband than for a retired couple living on nontaxable pensions or Social Security. Clearly, ability to pay for housing is better measured on the basis of disposable income (gross income minus taxes and work-related expenses) than on the basis of gross income; among households with a given disposable income, ability to pay for housing also varies with family size, for obvious reasons.

We propose a "disposable income" criterion for distinguishing families in need of assistance with their housing costs from those who can afford adequate housing without assistance. Our criterion, varying with household size, is based on consumption standards for a low-to-moderate level of living as determined by the Community Council of Greater New York; and on our own analysis of the full costs of a reasonably spacious apartment in a well-maintained New-Law tenement.

The Community Council has prepared detailed consumption budgets designed to meet specific standards for nutrition and health and otherwise to reflect social standards revealed in actual purchases by families of low-to-moderate incomes. Its housing allowances generally assume one room plus one room per person for all except large families, but reflect controlled rents rather than the amounts needed to support standard building services, the maintenance needed to prevent deterioration, real estate taxes, and a competitive return on capital. Our estimates of "full costs," based on documented expenses for a sample of well-maintained rent-controlled buildings, run about 17 to 33 percent above controlled rents for small apartments and 40 percent above controlled rents for large apartments.

We combined the Community Council's estimate of the cost of low-to-moderate levels of nonhousing consumption with our own estimates of the typical full costs of low-to-moderate levels of *housing consumption* to obtain *total nonwork-related consumption* budgets covering a low-to-moderate level of living for families living in New York City in 1967-1968. As summarized in the table below, these consumption budgets vary from \$2,600 for a single person living alone to \$9,100 for a family of

eight; adding tax liabilities and work-related expenses (assuming that all income was from employment of one household member), the equivalent gross incomes range from \$4,200 for a single person to \$11,200 for a family of eight. For families living on nontaxable transfer payments, gross incomes equal to the indicated consumption budgets would, of course, have been adequate.

Number of Persons	Low-to-Moderate Consumption Budget			Equivalent Earned Gross Income ^b	Rent/Income Ratios	
	Gross Rent	Other Consumption ^a	Total (Disposable Income)		Gross Rent/ Disposable Income	Gross Rent/ Gross Income
1	\$1,200	\$1,400	\$2,600	\$ 4,200	.46	.29
2	1,350	2,400	3,750	5,300	.36	.25
3	1,500	3,200	4,700	6,350	.32	.24
4	1,600	4,000	5,600	7,400	.29	.22
5	1,700	4,800	6,500	8,350	.26	.20
6	1,800	5,600	7,400	9,350	.24	.19
7	1,850	6,400	8,250	10,250	.22	.18
8	1,900	7,200	9,100	11,200	.21	.17

^a Food, clothing, medical care, household furnishings, recreation, etc. Does not include work-related expenses.

^b Includes income taxes, involuntary insurance, and work-related expenses for one employed household member.

The last two columns of the table show the rent/income ratios implied by our low-to-moderate consumption budgets, based alternatively on disposable and gross incomes. If the conventional gross-rent/gross-income standard were applied to all households, it would clearly discriminate against those supported by current earnings in favor of those living on nontaxable transfer payments; thus our preference for a "disposable income" criterion for distinguishing families in need of rent assistance.

AN APPROACH TO RENT ASSISTANCE

For families whose incomes are inadequate for the Community Council's low-to-moderate level of living, we distinguish between a public policy of income maintenance and one of housing assistance. The public commitment to income maintenance is embodied in the welfare program, which ensures a minimum standard of living to those unable to provide for themselves. Above this minimum, we see rent assistance as an incentive for a special kind of consumption that is generally believed to entail benefits either not perceived by or not limited to the direct consumer. Budget studies

indicate that the incentive is not generally required to persuade those whose disposable incomes are above our low-to-moderate level to consume the amount of housing that seems to satisfy the public consensus.

The range of disposable incomes between the welfare level and the low-to-moderate level is therefore the range within which rent assistance, but not income maintenance, seems appropriate. Within this range, there are precedents for three general formulas for rent assistance:

1. Rent-splitting formulas, by which the full cost of rental housing is divided between the public treasury and the tenant in proportions that do not vary with the income of the tenant. Federal, State, and City public housing programs have traditionally operated under such a formula.
2. Fixed-percent-of-income formulas, by which tenant contributions to the cost of publicly assisted housing are fixed as a percentage of tenant income, the public treasury making up the difference between the tenant contribution and full cost. The Federal rent supplements program is of this type.
3. Sliding-percent-of-income formulas, by which tenant contributions to the cost of publicly assisted housing are an increasing percentage of tenant income as that income rises. Such a formula was proposed in 1970 by the Federal Department of Housing and Urban Development (HUD) for general application to Federal programs of housing assistance.

There are many possible variations within these general formulas, with respect to the measurement of tenant income, the cost of the housing offered, and the rates (percent of rent, percent of income) governing the division of cost between the tenant and the public treasury.

Examination of the workings of specific programs using these formulas and their impacts on the budgets of families eligible to participate leads to broader conclusions about existing programs of rent assistance for residents of New York City. There are nearly a dozen such programs, though not all are designed to serve low-income families. They have three features in common:

1. *Rent assistance is available only to the occupants of specified housing units under contract to the assisting agency. With minor exceptions, only newly constructed or rehabilitated housing has been eligible for such contracts.*
2. *Families with very low earned incomes have not been well served by these programs. They tend to be excluded by assistance formulas that put the minimum tenant contribution beyond their means.*
3. *All are token programs in the sense that only a small fraction of those families eligible to participate can be accommodated by program resources.*

These features are interrelated. The high cost of new and rehabilitated housing requires a substantial public contribution for each family served, even though the tenant is required to pay as much or more rent than he did on the private market. Families with moderate incomes can pay a substantial share of the cost of this high-quality housing more easily than low-income families, and program eligibility formulas reflect this fact. With program eligibility extending into the moderate income range—or even higher in some State and City programs—no level of government has been willing to vote the funds that would be needed to aid all or even most eligible families. To legitimate the selective conferral of benefits within a large class of eligible families, rent assistance is granted only to tenants of particular housing units that have been built or rehabilitated under contract to the assisting agency. Indeed, in several of the programs, rent assistance seems almost incidental to the objective of adding to the stock of housing.

The obvious exception to these generalizations is the welfare program, which in 1969 provided housing assistance for nearly 15 percent of all renter households in New York City. Its effective standards of housing quality are minimal, it serves the poorest of the City's residents, and it is manifestly open to all eligible families. In mid-1969, the Department of Social Services contributed to the support of about 314,000 households living in rental quarters. About 18,000 of these paid no cash rent; the average gross rent paid by the remaining households was just under \$1,000 per year, of which the Department of Social Services contributed an average of 85 percent. Its total outlay for rent assistance approached \$250 million in 1969.

A program of housing assistance for households whose disposable incomes are above the welfare level but below the low-to-moderate level need not provide the necessarily expensive new housing associated with existing token programs, nor need it cover as large a fraction of the rent as the welfare program does. For these households, we propose the following principles as guidance in the design of a rent-assistance formula:

- 1. Rent assistance should be available to all low-income families, not a lucky few.*
- 2. Rent-assisted budgets should allow for rent expenditures adequate to cover the full costs of a low-to-moderate level of housing consumption.*
- 3. Rent-assisted budgets should allow at least the level of nonhousing consumption acknowledged in welfare schedules as the publicly supported minimum.*
- 4. Rent assistance schedules should not be designed so as to discourage those who can increase their incomes by gainful employment from so doing.*
- 5. The amounts of rent assistance granted should be the minimum consistent with the first four principles.*

We have devised a rent assistance formula that satisfies these principles. Beginning with full rent assistance for those with very low incomes, the amount of

assistance decreases to zero as disposable income increases to the low-to-moderate level. Basically, it is a sliding-percent-of-income formula, so constructed that the tenant contributes an increasing *percentage* of his disposable income toward the cost of his housing as his income rises, but he also retains a larger *dollar amount* to spend for nonhousing consumption.

For households whose disposable incomes before assistance are below the welfare level of nonhousing consumption, even full rent assistance would be inadequate to allow a welfare level of living. Such households, if not already on welfare, are logical candidates for an income maintenance, rather than a rent assistance program.

With respect to its impact on the budgets of low-income families supported by full-time employment, our formula does not differ greatly from the Federal rent supplements formula or that proposed by HUD in 1970 for all Federal programs, including public housing. Ours is less generous than these alternatives with respect to families living on nontaxable pensions or social security, and it provides a smoother transition from income maintenance to rent assistance. In comparison with the rent-splitting formula of public housing, ours is more generous to families with very low incomes and less generous to those whose incomes approach the low-to-moderate level.

ESTIMATING THE COSTS OF COMPREHENSIVE RENT ASSISTANCE

Assuming a much more modest and therefore less costly standard of housing than is characteristic of existing programs of rent assistance, we have estimated the costs of an expanded program for the benchmark year of 1968. It embraces some 640,000 households—over half consisting of one or two persons—who would have qualified under our low-to-moderate disposable income criterion but were not then receiving assistance. Program expansion to include these households and to raise housing standards for those already on welfare would have cost about \$532 million in 1968. This figure includes about \$175 million for households eligible for or then receiving welfare payments and \$356 million for partial rent assistance to other low-income households.

To display the implications of our analysis of unfulfilled housing needs in New York City, we have estimated the public costs and caseloads associated with a comprehensive rent assistance program, one that would enable all the City's low-income families to afford adequate housing without depriving themselves of a modest standard of living in other respects.

Our estimates are for 1968, the most recent year for which we could assemble all the data needed for our calculations. We assume a higher standard of housing quality than is typically available to welfare clients in New York City, but one below the level associated with most Federal, State, and City housing assistance programs.

Our estimates are based on the full costs in 1968 of apartments in well-maintained New-Law tenements, amounts substantially greater than ceiling rents current at that time. Eligibility for assistance is determined according to our "disposable income" criterion, described above. The schedule of public contributions reflects the five principles of our rent assistance formula, also presented above.

In 1968, rent assistance was provided to about 366,000 households in New York City; about 240,000 of these were welfare clients for whom rent assistance was part of an income-maintenance grant. The public cost of rent assistance granted to these households in 1968 was about \$324 million, shared by Federal, State, and City governments.

We estimate that another 640,000 households would have qualified either for income maintenance or rent assistance under our low-to-moderate disposable income criterion. Program expansion to include these households and to raise housing standards for households already on welfare would have cost about \$532 million in 1968. This figure includes about \$175 million for households eligible for or then receiving welfare payments and \$356 million for partial rent assistance to other low-income households.

Although we have not attempted to project these caseloads and costs into the future, we may note that since 1968 there has been a considerable increase in the welfare rolls, presumably absorbing many of those eligible in 1968 but not then enrolled. So far as we can evaluate recent and near-term future changes in household income, housing costs, and other consumer prices, we are inclined to believe that the number of households needing partial rent assistance by our criterion, and the amounts they need, is not growing and may be shrinking.

Finally, we note that a built-in fiscal mechanism, the City real estate tax, would recapture about a fourth of any increase in rent expenditures resulting from program expansion. *Net* public costs would therefore be considerably less than the \$532 million of public contributions, perhaps as low as \$400 million.

That is still a large sum. It is the reader's prerogative to judge whether the public benefits of an expanded program of rent assistance would outweigh its public costs. Our task has been to inform that judgment without preempting it; we hope that we have succeeded.

CONTENTS

FOREWORD, by Albert A. Walsh.....	iii
PREFACE	v
SUMMARY	ix
FIGURES	xxix
TABLES	xxxix
Chapter	
I. INTRODUCTION.....	1
II. POPULATION CHANGES AND HOUSEHOLD FORMATION	9
How Many People Live in New York City?	9
Migration and Ethnic Change	12
Trends in Living Arrangements	16
Net Household Formation, 1960-1970	18
Trends in Space Usage.....	22
Summary	23
III. INCOMES AND LEVELS OF LIVING	25
Incomes of Unrelated Individuals and Families, 1950-1969	27
Incomes of Households, 1960-1968	31
Public Assistance as a Source of Income.....	37
Incomes of Homeowners and Renters	44
Renter Households: Levels of Living	49
Summary	53

IV.	RENT EXPENDITURES AND THEIR DETERMINANTS.....	55
	Trends in Rents and Incomes, 1950-1968	56
	Gross Monthly Rent Expenditures.....	56
	Incomes of Renter Households	58
	Rent/Income Ratios	59
	The Role of Welfare Rent Assistance	61
	Rent Expenditures in Four Housing Submarkets.....	64
	Variations with Income, by Sex and Ethnicity of Household Head.....	65
	Variations with Household Size	69
	Variations with Age of Household Head	71
	Summary	73
V.	RENT CONTROL AND THE DEMAND FOR HOUSING	75
	Who Lives in Controlled Housing?.....	75
	Household Characteristics	76
	Reference Incomes	78
	Duration of Tenure	81
	Is Controlled Housing a Bargain?.....	83
	Comparing Controlled and Uncontrolled Housing Units	86
	Estimating Market Rents for Controlled Housing Units	87
	Rent Control and Housing Choices.....	92
	Location of Residence	92
	Size of Apartment.....	95
	Quality of Housing.....	100
	Rent Control and Housing Expenditures.....	104
	Summary	109
VI.	RENT-PAYING ABILITY AND HOUSING COSTS.....	111
	Patterns of Rent Expenditure in New York City	112
	Precedents in Housing Assistance Programs	113
	A Low-to-Moderate Budget Standard.....	118
	Budget Variations with Family Size and Composition	119
	Housing Standards and Rent Allowances.....	122
	Rent Allowances vs. Typical Rent Expenditures	125
	How Well Do Rules of Thumb Work?.....	127
	Estimating the Full Costs of Adequate Housing.....	130
	Determining Ability-to-Pay: A "Disposable Income" Criterion	135
	Summary	140
VII.	AN APPROACH TO RENT ASSISTANCE.....	143
	Rent Assistance vs. Income Maintenance.....	143
	Alternative Formulas for Rent Assistance	146

Rent Assistance under Three Federal Programs.....	149
Rent-Assisted Budgets for Tenants of New Housing.....	150
Rent-Assisted Budgets for Tenants of Old Housing.....	152
Comparisons with Unassisted Budgets and Budget Standards.....	154
Public Contributions Required by Alternative Formulas.....	159
Limitations of Existing Programs.....	160
Contruction-Oriented Programs.....	160
Welfare Rent Assistance.....	160
Incomplete Coverage of Existing Programs.....	161
Designing a Comprehensive Rent Assistance Program.....	164
Five Principles of Program Design.....	164
Matching Rent Assistance to Family Budgets.....	164
A Mathematical Formulation.....	168
Summary.....	172

VIII. ESTIMATING THE COSTS OF COMPREHENSIVE RENT ASSISTANCE IN NEW YORK CITY.....	176
Existing Programs: Caseloads and Costs in 1968.....	177
Extending Assistance to All Low-Income Households.....	180
Estimating the Numbers of Eligible Households.....	180
Estimating the Amounts of Assistance Needed.....	181
The Comprehensive Program: Caseloads and Costs in 1968.....	185
Fiscal Implications and Qualifications.....	188
Summary.....	191

Appendix

A. SUPPLEMENTARY DATA ON POPULATION CHANGES AND HOUSEHOLD FORMATION.....	193
The 1960 Census of Population.....	193
The Metropolitan Estimates Program.....	194
The New York City Housing and Vacancy Surveys.....	195
The New York City Population Health Survey.....	195
Estimates Prepared by The New York City-Rand Institute.....	196
Other Population Estimates and Projections.....	197
The 1970 Census of Population.....	197
B. SUPPLEMENTARY DATA ON INCOMES AND LEVELS OF LIVING.....	205
Incomes of Families and Households.....	205
Sampling Reliability.....	207
Accuracy of Income Reporting.....	208

Nonresponse Bias	208
Incomes of Welfare Households in 1969	211
 C. SUPPLEMENTARY DATA ON RENT EXPENDITURES AND THEIR DETERMINANTS	225
Gross Rent Expenditures, 1950-1968	225
Incomes of Renter Households, 1950-1968	226
Rent/Income Ratios of Renter Households, 1950-1968	226
Rent/Income Ratios of Welfare and Nonwelfare Households in 1968	227
Regression Analysis of Rent Expenditures in 1968	228
 D. SUPPLEMENTARY DATA ON RENT CONTROL AND THE DEMAND FOR HOUSING	238
Comparing the Tenants of Controlled and Uncontrolled Housing	238
Determinants of Residential Rents: Regression Analysis	239
Estimating Market Rents for Multiple Dwellings	240
Estimating Market Rents for One- and Two-Family Houses	244
Estimating Market Rents for Controlled Housing	245
Effects of Rent Control on Housing Expenditures	245
 E. SUPPLEMENTARY DATA ON RENT-PAYING ABILITY AND HOUSING COSTS	261
Standards Governing Housing Assistance Programs in 1969	261
Minimum Housing Standards: Space, Equipment, Quality, and Community Facilities	263
Estimating the Full Costs of a Low-to-Moderate Housing Standard	265
Cost Data for Rent-Controlled Housing	265
Components of Housing Costs	267
Variations in Costs with Size of Unit	271
Typical Full Costs Compared with Controlled and Market Rents	274
 F. SUPPLEMENTARY DATA ON RENT ASSISTANCE FORMULAS	285
Rent Assistance under Three Federal Programs	285
Low-Income Households Not Receiving Rent Assistance in 1968	286
Matching Rent Assistance to Family Budgets	287
A Formula for Rent Assistance	288

G. SUPPLEMENTARY DATA ON THE COSTS OF	
COMPREHENSIVE RENT ASSISTANCE	296
Estimating the Costs of Extending Assistance to All	
Low-Income Households	296
Comparisons with Earlier Estimates	299
Households Aided in 1968	300
Households Not Aided in 1968	300

FIGURES

1. Estimates and projections of the population of New York City, 1950-1970.....	10
2. Living arrangements in New York City, 1960.....	17
3. Trends in the numbers of households by size of household: New York City, 1950-1970	20
4. Trends in the use of housing space in New York City, 1950-1968.....	22
5. Trends in real incomes of unrelated individuals and families: New York City, 1950-1969	30
6. Comparison of family and household incomes reported by different surveys: New York City, 1968 and 1969.....	34
7. Trends in real incomes of households, by size of household: New York City, 1960-1968	36
8. Households and families with incomes below welfare standards: New York City, 1968/1969	43
9. Distribution of households by tenure and size of household: New York City, 1968	45
10. Comparison of incomes of homeowners and renters, by size of household: New York City, 1968.....	47
11. Comparison of levels of living of renter households, by size of household: New York City, 1968	51
12. Percentage distribution of renter households, by gross rent expenditures: New York City, 1950-1968	57
13. Percentage distribution of renter households, by income of head and related persons: New York City, 1950-1968	58
14. Numbers of renter households on welfare and not on welfare by rent/income ratio: New York City, 1968.....	63
15. Gross rent expenditures as a function of income: four-person households headed by males 42 years of age.....	66
16. Gross rent expenditures as a function of income: four-person households headed by females 42 years of age	68

17.	Gross rent expenditures as a function of household size: households headed by white males 42 years of age	70
18.	Gross rent expenditures as a function of age of head: two-person households headed by white males	72
19.	Percentage distribution of renter households with selected characteristics, by control status of housing: New York City, 1968.....	77
20.	Percentage distribution of renter households in controlled and uncontrolled housing, by selected household characteristics: New York City, 1968	79
21.	Percentage distribution of rent-paying households in controlled and uncontrolled housing, by reference income: New York City, 1968	80
22.	Selected housing characteristics of tenants of controlled rental housing, by length of tenure: New York City, 1968	82
23.	Selected household characteristics of tenants of controlled rental housing, by length of tenure: New York City, 1968	84
24.	Percentage distribution of controlled and uncontrolled housing units, by gross rent per unit: New York City, 1968.....	85
25.	Percentage distribution of controlled housing units by estimated difference between market rent and controlled rent, by type of structure: New York City, 1968.....	91
26.	Percentage distribution of controlled housing units by estimated difference between market rent and controlled rent, by borough: New York City, 1968.....	94
27.	Percentage distribution of one-person households in controlled and uncontrolled housing, by number of rooms per unit: New York City, 1968	96
28.	Comparison of hypothetical and actual rents paid by tenants of controlled housing, by income of tenant: New York City, 1968	107
29.	Four-person family budgets under three rent-assistance programs: new housing at \$2,400 annual gross rent	151
30.	Four-person family budgets under three rent-assistance programs: old housing at \$1,600 annual gross rent	153
31.	Renter households not receiving rent assistance with incomes below selected levels: New York City, 1968.....	162
32.	Trial budgets, including public contributions, for low-income households of one and two persons: New York City, 1968.....	166
33.	Trial budgets, including public contributions, for low-income households of three and four persons: New York City, 1968.....	169
34.	Trial budgets, including public contributions, for low-income households of five and six persons: New York City, 1968.....	170

TABLES

1.	Population Change by Ethnic Group: New York City, 1940-1965...	14
2.	Population by Borough and Ethnic Group: New York City, 1950-1965.....	15
3.	Number of Persons in Households, Number of Households, and Average Household Size: New York City, 1950-1970.....	21
4.	Percentage Distribution of Unrelated Individuals and Families by Income in 1968 Dollars, by Size of Family: New York City, 1969.....	28
5.	Comparison of Median Incomes of Unrelated Individuals and Families: New York City and Other Metropolitan Areas, 1969 ...	29
6.	Percentage Distribution of Households by Income in 1967 Dollars, by Size of Household: New York City, 1968.....	32
7.	Changes in the Numbers of One-Person Households and Unrelated Individuals, by Income in 1968 Dollars: New York City, 1960-1969.....	35
8.	Number of Households Containing Welfare Clients by Income in 1969 Dollars, by Size of Household: New York City, 1969.....	38
9.	Comparison of Incomes of Welfare Households and All Low-Income Households, by Size of Household: New York City, 1968/1969.....	40
10.	Migration Histories of White and Negro Residents 14 Years and Older, by Welfare Status: New York-Northeastern New Jersey Standard Consolidated Area, 1967.....	41
11.	Percentage Distribution of Renter Households by Income in 1967 Dollars, by Size of Household: New York City, 1968.....	48
12.	Numbers of Renter Households by Reference Income in 1968 Dollars, by Size of Household: New York City, 1968.....	52
13.	Percentage Distribution of Renter Households by Rent/Income Ratio: New York City, 1950-1968.....	60
14.	Distribution of Welfare Households by Rent/Income Ratio: New York City, 1969.....	62
15.	Comparison of Typical Rent Expenditures by Ethnic Group and	

	Sex of Household Head: Manhattan and Other Boroughs, 1968. . . .	69
16.	Distribution of Controlled and Uncontrolled Rental Housing Units, by Gross Rent per Room: New York City, 1968	87
17.	Condition of Structure for Controlled and Uncontrolled Rental Housing Units by Gross Rent per Room: New York City, 1968	88
18.	Median Gross Rent per Room for Controlled and Uncontrolled Rental Housing Units by Borough: New York City, 1968	88
19.	Monthly Rental Premiums for Comparable Housing Units in Five Boroughs: New York City, 1968	93
20.	Number of Households by Size of Housing Unit, by Size of Household: Controlled Rental Housing in New York City, 1968 ..	97
21.	Number of Households by Size of Housing Unit, by Size of Household: Uncontrolled Rental Housing in New York City, 1968.	98
22.	Number of Households by Size of Housing Unit, by Size of Household after Hypothetical Reallocation of Space: Controlled and Uncontrolled Rental Housing in New York City, 1968.	99
23.	Distribution of Families in Transitional Neighborhoods by Willingness To Pay More for Features Lacking in Present Apartment, by Control Status: New York City, 1969	103
24.	Comparison of Hypothetical and Actual Rents Paid by Tenants of Controlled Housing, by Ethnic Group and Sex of Household Head: Manhattan and Other Boroughs, 1968	108
25.	Income and Rent/Income Limits for Admission to Selected Housing Assistance Programs: New York City, 1969.	114
26.	Incomes and Rent/Income Ratios of Families Assisted by Selected Housing Programs, by Household Size: New York City, 1968-1969.	117
27.	Community Council Estimates of Annual Costs of Low-to-Moderate Level of Living: Selected Families, New York City, October 1967.	120
28.	Comparison of Community Council Low-to-Moderate Gross Incomes with Median and Quartile Incomes of Selected Groups, by Size of Household: New York City, 1968	122
29.	Community Council Housing Standards: Number and Type of Rooms, by Family Size.	123
30.	Comparison of Community Council Rent Allowances with Rents of "Sound" Controlled Apartments: New York City, 1967-1968.	124
31.	Comparison of Community Council Rent Allowances with Regression Estimates of Actual Rent Expenditures: Selected Families, New York City, 1967-1968	126
32.	Comparison of Community Council Allowances for Nonhousing Expenditures with Regression Estimates of Actual Nonhousing Expenditures: Selected Families, New York City, 1967-1968.	128

33.	Comparison of Community Council Rent Standards with Rule-of-Thumb Standards: Selected Families: New York City, October 1967.....	129
34.	Estimates of Contract and Gross Rents Needed To Cover Full Costs of Housing Meeting Community Council Standards, by Size of Unit: New York City, 1966-1967	133
35.	Comparison of Median Gross Rents with Full Costs, by Size of Unit: Well-Maintained Controlled Housing, New York City, 1966-1968.....	135
36.	Disposable and Gross Incomes Required to Support a Low-to-Moderate Standard of Living, by Household Size: New York City, 1967-1968.....	138
37.	Rent/Income Ratios for a Low-to-Moderate Standard of Living by Source of Income, by Size of Household: New York City, 1967-1968.....	139
38.	Comparison of Median Welfare Allowance and Low-to-Moderate Income by Household Size: New York City, 1967-1968	146
39.	Four-Person Family Budgets for Nonhousing Consumption, by Gross Income: Comparisons of Rent-Assisted Families in New Housing with Unassisted Families in Controlled and Uncontrolled Housing, 1967-1969	155
40.	Four-Person Family Budgets for Nonhousing Consumption, by Gross Income: Comparisons of Rent-Assisted Families in Old Housing with Unassisted Families in Controlled and Uncontrolled Housing, 1967-1969	156
41.	Public Contributions under Alternative Rent Assistance Formulas: New and Old Housing for a Four-Person Family, 1969.....	159
42.	Public Costs of Welfare Rent Assistance and Additional Need, by Size of Household: New York City, 1968.....	179
43.	Public Costs of Existing Low-Income Rent Assistance, by Program: New York City, Fiscal 1968	180
44.	Public Costs of Rent and Other Assistance for Households of Group I, Assuming Full Rent Assistance: New York City, 1968....	182
45.	Public Costs of Assistance for Households of Group I, Prorated between Rent and Other Consumption: New York City, 1968.....	182
46.	Public Costs of Proposed Rent Assistance for Households of Group II: New York City, 1968	183
47.	Numbers of Low-Income Households Covered by Existing and Proposed Programs of Housing Assistance, by Type of Program: New York City, 1968	185
48.	Public Costs of Existing and Proposed Programs of Housing Assistance, by Type of Program: New York City, 1968.....	186

APPENDIX TABLES

A-1.	Estimates and Projections of Total Population: New York City, 1960-1970.....	199
A-2.	Living Arrangements of Families and Unrelated Individuals: New York City, 1960	200
A-3.	Numbers of Unrelated Individuals, Families by Size, and Persons in Families and Not in Families: New York City, 1950-1970.....	201
A-4.	Numbers of Households by Size and Persons in Households and Not in Households: New York City, 1950-1970	202
A-5.	Numbers of Households by Size, by Ethnic Group of Household Head: New York City, 1968	203
A-6.	Numbers of Rooms and Persons in Occupied Housing Units: New York City, 1950, 1960, and 1968	204
B-1.	Percentage Distribution of Unrelated Individuals and Families by Income in 1968 Dollars: New York City, 1950, 1960, and 1969.....	213
B-2.	Numbers of Unrelated Individuals and Families by Income in 1959 Dollars, by Size of Family: New York City, 1960	214
B-3.	Numbers of Households by Income in 1959 Dollars, by Size of Household: New York City, 1960	215
B-4.	Numbers of Households by Income in 1964 Dollars, by Size of Household: New York City, 1965	216
B-5.	Numbers of Households by Income in 1967 Dollars, by Size of Household: New York City, 1968	217
B-6.	Comparisons of Median and Quartile Incomes in 1968 Dollars as Reported in Various Surveys: New York City, 1960-1969.....	218
B-7.	Percentage Not Reporting Income, by Tenure and Type of Housing, by Household Size: New York City Housing and Vacancy Survey, 1965	219
B-8.	Percentage Not Reporting Income, by Tenure and Type of Housing, by Household Size: New York City Housing and Vacancy Survey, 1968	219
B-9.	Numbers of Households with Incomes Below Welfare Standards, by Welfare Status, by Size of Household: New York City, 1968/1969	220
B-10.	Numbers of Families with Incomes Below Welfare Standards, by Welfare Status, by Size of Family: New York City, 1969.....	220
B-11.	Distribution of Households by Tenure and Size of Household: New York City, 1968	221
B-12.	Numbers of Homeowner Households by Income in 1967 Dollars, by Size of Household: New York City, 1968.....	222

B-13.	Numbers of Renter Households by Income in 1967 Dollars, by Size of Household: New York City, 1968.....	223
B-14.	Percentage Distribution of Renter Households by Reference Income in 1968 Dollars, by Size of Household: New York City, 1968.....	224
C-1.	Distribution of Renter Households by Gross Rent Expenditure: New York City, 1950-1968	231
C-2.	Distribution of Renter Households by Income of Head and Related Persons: New York City, 1950-1968	232
C-3.	Numbers of Renter Households by Rent/Income Ratio, with Analysis of "Not Computed" Cases: New York City, 1950-1968	233
C-4.	Numbers of Renter Households by Rent/Income Ratio, with Allocation of "Not Computed" Cases: New York City, 1950-1968... ..	234
C-5.	Renter Households on Welfare by Contract Rent, by Household Income: New York City, 1 July 1969	235
C-6.	Renter Households on Welfare and Not on Welfare, by Rent/Income Ratio: New York City, 1968.....	236
C-7.	Rent/Income Ratios as Functions of Income and Household Characteristics: Four Housing Submarkets in New York City, 1968.....	237
C-8.	Gross Rent Expenditures as Functions of Income and Household Characteristics: Four Housing Submarkets in New York City, 1968.....	237
D-1.	Percentage Distribution of Renter Households with Selected Characteristics, by Control Status of Housing: New York City, 1968	248
D-2.	Distribution of Renter Households in Controlled and Uncontrolled Housing, by Selected Household Characteristics: New York City, 1968	249
D-3.	Renter Households in Controlled Housing by Household Size and Income: New York City, 1968	250
D-4.	Renter Households in Uncontrolled Housing by Household Size and Income: New York City, 1968	251
D-5.	Distribution of Renter Households in Controlled and Uncontrolled Housing, by Reference Income: New York City, 1968.....	252
D-6.	Selected Housing Characteristics of Tenants of Controlled Rental Housing, by Length of Tenure: New York City, 1968	253
D-7.	Selected Household Characteristics of Tenants of Controlled Rental Housing, by Length of Tenure: New York City, 1968	254
D-8.	Distribution of Controlled and Uncontrolled Rental Housing Units, by Gross Rent per Unit: New York City, 1968	255
D-9.	Distribution of Controlled Housing Units by Estimated Difference between Market Rent and Controlled Rent, by Type of Structure: New York City, 1968.....	256

D-10.	Distribution of Controlled Housing Units by Estimated Difference between Market Rent and Controlled Rent, by Borough: New York City, 1968	257
D-11.	Market Rental Value of Housing Units in Multiple Dwellings as a Function of Physical Characteristics: New York City, 1968.....	258
D-12.	Market Rental Value of Housing Units in One- and Two-Family Structures as a Function of Physical Characteristics: New York City, 1968	259
D-13.	Comparison of Hypothetical and Actual Rents Paid by Tenants of Controlled Rental Housing, by Income of Tenant: New York City, 1968	260
E-1.	Rent/Income Standards Governing Housing Assistance Programs: New York City, 1969	277
E-2.	Community Council Housing Standards: Space, Equipment, Quality, and Community Facilities.....	280
E-3.	Summary of Physical and Financial Characteristics of 311 Buildings Granted Hardship Rent Increases in 1966 and 1967.....	281
E-4.	Mean Values of Physical and Financial Characteristics of 311 Buildings Granted Hardship Rent Increases in 1966 and 1967, by Location.....	282
E-5.	Estimates of Typical Full Costs for Apartments of Two to Six Rooms, Assuming Existing Pattern of Assessed Value: Selected "Hardship" Buildings, 1966-1967	283
E-6.	Estimates of Typical Full Costs for Apartments of Two to Six Rooms, Assuming Adjusted Pattern of Assessed Value: Selected "Hardship" Buildings, 1966-1967	283
E-7.	Comparison of "Full-Cost" Gross Rents in 1966-1967 with Median Gross Rents for Selected Groups of Controlled and Uncontrolled Apartments in 1968, by Size of Unit	284
F-1.	Rent Assistance and Family Budget Computations for Three Federal Programs: Four-Person Families in Housing Whose Market Rental Is \$2,400 Annually.....	291
F-2.	Rent Assistance and Family Budget Computations for Three Federal Programs: Four-Person Families in Housing Whose Market Rental Is \$1,600 Annually.....	292
F-3.	Number of Renter Households Paying Cash Rent, Excluding Welfare Recipients and Public Housing Tenants, by Income in 1967 Dollars, by Size of Household: New York City, 1968	293
F-4.	Numbers of Renter Households Not Receiving Rent Assistance, with 1967 Incomes below Selected Levels: New York City, 1968 ...	293
F-5.	Computation of Public Contributions to Consumption Budgets of Households at Selected Levels of Disposable Income, by Size of Household: New York City, 1968	294

G-1.	Numbers of Households in Group I-A and Amounts of Rent and Other Assistance Needed: New York City, 1968.....	302
G-2.	Numbers of Households in Group I-B and Amounts of Rent and Other Assistance Needed: New York City, 1968.....	303
G-3.	Numbers of Households in Group II-A and Amounts of Rent Assistance Needed: New York City, 1968.....	304
G-4.	Numbers of Households in Group II-B and Amounts of Rent Assistance Needed: New York City, 1968.....	305
G-5.	Comparison of Preliminary and Revised Estimates of Rent Assistance Caseloads and Public Costs: New York City, 1968.....	306

I. INTRODUCTION

New York City's rental housing market is in serious trouble, its current performance pleasing neither tenants nor landlords. There is a persistent shortage of rental housing, with vacancies amounting in 1968 to only 1.2 percent of the rental inventory and that inventory shrinking by more than 7,000 units annually. A fifth of all family rental housing was classified as deteriorating or dilapidated in 1968, up 35 percent over the corresponding fraction in 1960. About 114,000 units were abandoned by their owners or withdrawn from the market between 1965 and 1968. There has been increasing friction between landlords and tenants over issues of rent, maintenance, and building services, often reaching the point of open conflict: rent strikes and malicious mischief by tenants, discontinuation of building services and harassment of tenants by landlords.¹

The causes of the City's rental housing crisis are complex and therefore subject to differences of interpretation and emphasis, particularly if explanation is aimed at fixing blame. We find it less fruitful to search for the villains of the piece than to try to understand the economic and social trends that led to the present impasse. From this perspective, two major direct causes stand out: (1) The costs of supplying rental housing have for some years been rising faster than rental revenues in a large part of the rental housing stock, reducing the profitability and often threatening the solvency of rental housing investments. (2) Rapid increases in the City's black and Puerto Rican populations have upset established networks of social and economic relationships in many neighborhoods, with attendant difficulties for their housing markets.

Behind these direct causes, of course, are others. To name a few: national monetary and fiscal policies that have permitted general inflation; a local system of rent control that has severely limited rent increases in much of the rental stock; regional disparities in economic and social opportunity that have led southern blacks and native Puerto Ricans to seek their fortunes in cities such as New York;

¹ *Rental Housing in New York City*, Vol. I, *Confronting the Crisis*, edited by Ira S. Lowry, RM-6190-NYC, The New York City-Rand Institute, February 1970, pp. 2-11. For a similar but independent diagnosis, see Frank S. Kristof, "Housing: Economic Facets of New York City's Problems" in *Agenda for a City: Issues Confronting New York*, edited by Lyle C. Fitch and Annmarie Hauck Walsh, Institute of Public Administration, Sage Publications, Beverly Hills, 1970, pp. 297-348.

and programs of public assistance and unemployment compensation that reduced their risks in moving.

The chain of causation is unfortunately endless. But for those interested in amelioration of the City's housing problems, there is much to be said for focusing on those links in the chain that are susceptible in some degree to local influence or control. One of these is the growing disparity between the costs of supplying rental housing and rental revenues. We estimate that these costs have increased at an average rate of 4 to 6 percent annually between 1945 and 1968. During the last 3 years of that period, the average annual increase was over 8 percent, primarily because of a sharp rise in the cost of mortgage financing.²

In 1968, the problem of inadequate revenue was centered in the two-thirds of the private rental stock that had been subject to rent control since 1943, both because the system of control had severely limited rent increases during that period and because this sector of the stock housed most of the City's low-income families. We estimate that the average increase in the rents of these units over that 25-year period was about 2 percent annually, well below the average annual increase in costs, especially since 1965; moreover, the increases permitted under the law were quite unevenly distributed among housing units and buildings.

Faced with rapidly rising costs and slowly rising rents, landlords of these buildings either accepted declining profits or reduced maintenance and building services. In much of the controlled inventory, their response has been to disinvest by undermaintenance; a growing number have cut their losses by withdrawing their buildings from the rental market, in some cases even abandoning title. Institutional investors, foreseeing difficulties, have increased the landlords' problems by refusing to renew mortgage loans on many such buildings, and the real estate market in many neighborhoods of the City is paralyzed.

In the rest of the stock, rents have generally risen to cover rising costs, although many new buildings fell behind in the early sixties because a short-lived building boom temporarily glutted the market for new apartments. In 1968-1969, it was not uncommon for owners of uncontrolled buildings to ask for rent increases of 25 percent on 2-year leases. However, legislation adopted in 1969 by the City Council scaled down these increases to a maximum of 10 percent on 2-year leases and 15 percent on 3-year leases, bringing most previously uncontrolled housing under a modified form of rent control, in which future rent increases must be justified by increases in costs.³

In 1970, the City Council amended the basic rent control law governing 1.3 million housing units built before 1947, to provide for a new method of adjusting

² For long-run trends in maintenance and operating costs, see C. Peter Rydell, *Factors Affecting Maintenance and Operating Costs in Federal Public Housing Projects*, R-634-NYC, The New York City—Rand Institute, December 1970. For detailed data on the period 1966 to 1968, see George Sternlieb, *The Urban Housing Dilemma*, a draft report to the Department of Rent and Housing Maintenance, HDA, released in May 1970.

³ New York City Local Law 16, passed by the City Council on 24 April 1969 and signed by the Mayor in May 1969. It provides for the formation of a Real Estate Industry Stabilization Association, in which membership is compulsory. Rent increases by member landlords must be approved by a Rent Stabilization Board, who are to be guided by changes in an operating cost index.

ceiling rents to reflect changes over time in the owner's costs. The amendment provided for interim increases up to 15 percent, effective in August 1970. (Low-income families headed by elderly persons were exempted from these increases.) Beginning in January 1972, the Office of Rent Control was authorized to set Maximum Base Rents (MBR) for all controlled apartments at levels that cover standard costs for maintenance and operations, plus real estate taxes and a "fair return" of 8.5 percent on equalized assessed value. If the MBR is greater than the existing ceiling rent of an occupied apartment, the latter may be increased by no more than 7.5 percent annually until the maximum is reached; ceiling rents on vacant apartments can be raised immediately to MBR. In both cases, evidence of satisfactory building maintenance is a condition for granting rent increases. Every 2 years, MBR may be revised to reflect interim changes in maintenance and operating costs and real estate taxes.⁴

The first of these laws was designed to prevent rent increases in excess of costs by owners of previously unregulated multiple dwellings; the second was designed to allow ceiling rents on previously controlled housing to catch up with costs. It is too soon to measure their effects on the City's rental housing market. One important influence on the outcome is the ability and willingness of tenants to pay the full costs of well-maintained housing, an issue so far addressed only by the exemption of low-income families headed by elderly persons from the interim rent increases of November 1970.

With nearly all of the City's rental housing now under some form of rent control or regulation, there is every reason to expect that both rent regulations and special provisions for tenant relief or assistance will continue to be debated in New York City. The issues are complex, for the budgetary problems of renter families must be balanced against the revenues needed by building owners, the public interest in maintaining minimum standards of housing quality, and the fiscal capacity of the City to help where help is needed.

This volume in our series on *Rental Housing in New York City* is meant to clarify these issues. Specifically, it sheds light on the ability of the City's renter households to pay for adequate housing, thus providing guidance to those who must decide who, if anyone, should be helped by public action. With this purpose in mind, we present a historical perspective on incomes and rents in New York City and an analysis of variations in rent expenditures among different types of households and in the City's principal housing submarkets. We show who has benefited from the City's program of rent control and how large these benefits have been. We bring as much science as we can muster to the definition of "ability-to-pay" and review in this light the targeting and impact of traditional forms and standards of rent assistance. Finally, we offer our conclusions about the need for rent assistance in New York City, and the form it might take if public funds were available for that purpose.

Although our study is directly concerned only with renter households and their housing, we begin with a broader perspective. Chapters II and III deal with

⁴ New York City Local Law 30, amending the rent control law, and Local Law 31, providing exemptions for low-income families headed by elderly persons; both were passed by the City Council on 26 June 1970 and signed by the Mayor on 10 July 1970.

homeowners as well as renters, reviewing trends in the number of inhabitants of New York City, their living arrangements, and their incomes. The principal reason for beginning with the wider view is that renters and owners are not permanently distinct groups, but trade membership over time. A second reason is that some kinds of data available for the population as a whole are not available separately for renters, who account for about three-fourths of all households.

Chapter II, then, reviews the principal changes in population characteristics and living arrangements that have occurred since 1950. Although there has been little change in the total number of inhabitants over the past 20 years, there has been an immense turnover of residents, with white outmigrants replaced by black and Puerto Rican immigrants, particularly in the Bronx and in Brooklyn. Even if this immigration tapers off, as it shows some signs of doing, we foresee continued growth of the City's black and Puerto Rican population, relative to its white population, due to different rates of natural increase. The housing and neighborhood problems associated with ethnic succession are likely, therefore, to continue to demand much civic attention.

We also trace in Ch. II the trend to smaller families and separate living arrangements, which has proceeded so far in New York City that over half of all households now consist of only one or two persons and over three-fourths of all unrelated individuals live alone in quarters that are complete with private bath and kitchen facilities. Paradoxically for a city that is alleged to have a severe housing shortage, we find little evidence of involuntary cohabitation of persons or families, and a steady increase over the past 20 years in the number of rooms per person.

Trends in incomes and levels of living are reviewed in Ch. III. Picking our way carefully through some thorny data problems, we conclude that the decade of the 1950s saw a dramatic growth in the purchasing power and levels of living available to most of the City's residents; while money incomes continued to rise in the 1960s, price inflation has offset much of the apparent gain. Even so, many readers will be surprised, as we were, by the level of prosperity revealed by the most recent and most thorough account of family incomes. During the past decade, public assistance became a major factor in altering the City's income distribution, and we show the result.

In Ch. IV, we narrow our focus, dealing thereafter only with renter households, their incomes, and rent expenditures. Both incomes and rents have risen since 1950, more or less proportionately; the distribution of households by rent/income ratio in 1968 is not much changed from 1950, especially if welfare recipients, whose rents are paid by the Department of Social Services, are excluded.

The rent/income ratio is widely used as a test of the budgetary strain imposed on a family by the cost of its housing. Rent expenditures vary widely in New York City, from less than a tenth to as much as half of family income. Using multiple regression techniques to isolate relationships that tend to be obscured in ordinary cross-tabulations, we show how rent expenditures vary for similar households in four major housing submarkets and also how they vary, in each submarket, with income, household size, and the age, sex, and ethnic group of the household head. The findings are in many respects surprising, running counter to widespread beliefs.

In 1968, the City's program of rent control covered about two-thirds of all rental housing units. When tenants of controlled housing were matched on income and household characteristics with tenants of uncontrolled housing, they typically paid substantially less rent than the latter. Presumably, they were getting a bargain relative to their counterparts in uncontrolled housing. The extent of the bargain is not altogether clear, since differences in controlled and uncontrolled rents are accompanied by differences in the location, size, and intrinsic quality of the units occupied, and by differences in the level of services provided by the landlord.

In Ch. V, we try to identify the beneficiaries of this presumptive bargain in terms relevant to public policy, distinguishing the characteristics of families living in controlled housing from those of families living in housing that was uncontrolled in 1968. We also estimate the magnitude of the benefits conferred on tenants of controlled housing by legal restrictions on the landlord's freedom to charge what the traffic will bear. Finally, we explore some of the ways in which rent control is often alleged to have distorted or altered patterns of housing consumption in New York City.

The rents that New Yorkers actually pay, and the variations of these rents with characteristics of their housing and of their households, are, within limits, objectively measurable. The more difficult but more pertinent question for public policy is whether a given family pays too much or too little for its housing. An answer to this question must deal on the one hand with the family's resources, its requirements for nonhousing consumption, and its ability to pay rent out of a limited budget; and on the other hand, with the standards of space and housing quality that are essential to family welfare, a proper concern of public policy whatever the inclinations of the tenant.

These issues are not resolvable by strictly scientific methods. Obviously a family cannot for any extended period of time spend more for consumption of all kinds than it receives as income; but what a family can "afford" to spend for housing is very much a matter of subjective judgment. By economizing on clothing or entertainment, it can spend more for food or housing; alternatively, by economizing on housing, it can perhaps afford an automobile. There is considerable flexibility in family budgets.

It is equally impossible to determine on strictly scientific grounds how far the public interest should be engaged with standards of space or housing quality. It is clearly not in the public interest to permit families to live in unhealthful or dangerous quarters. But we are able to identify as such only the most obvious threats to health and safety; housing standards invoked in public discussion usually go beyond these to matters of comfort and decency that reflect an intuitive public consensus rather than any measurable consequences of housing deficiencies.

Practically speaking, questions of ability to pay and standards of housing consumption are, in the best sense of the word, *political* questions, to be resolved in the arena of public debate and legislation. Analysis can help, nonetheless, by laying out feasible and coherent alternatives of policy and showing their programmatic implications. This is the purpose of the last two chapters of the present volume.

In Ch. VI, we begin by reviewing the various standards of ability-to-pay that

are embodied in New York City's existing programs of publicly assisted housing. Unable to find a coherent logic for these standards, we turn to family budget studies in search of a better formulation of the issue. Studies of this type made by the Community Council of Greater New York offer useful estimates of the costs of an arbitrarily chosen standard of living for families of various sizes and compositions, and help us to make some important distinctions between gross and disposable incomes, depending on the employment status of family members and the sources of family income.

The Community Council also proposes minimum standards of space and housing quality for families of each size and estimates the actual costs of these standards in New York City. Accepting its standards as a working approximation to public consensus, we examine the cost of meeting these standards of housing in New York City, using the Community Council's own estimates and those of other sources. With qualifications for larger households, these sources generally agree.

Combining these estimates of the cost of adequate housing with the Community Council's nonhousing consumption budget, we emerge with an operational definition of the cost in New York City of a "low-to-moderate" standard of living for families of various sizes, and of the gross incomes needed to support this standard after allowance for taxes and work-related expenses. We show that families whose incomes are above the "low-to-moderate" level are typically both willing and able to pay the full costs of decent, safe, and sanitary housing.

As we show in Ch. VII, there is a considerable gap between the incomes needed to support a low-to-moderate level of living as defined above and the incomes provided by public assistance to individuals and families who are, for various reasons, unable to support themselves. In that chapter, we take the range between the typical welfare allowance and a low-to-moderate income as the range within which the cost of adequate housing implies sufficient strain on family budgets to make a *prima facie* case for some limited form of rent assistance, as distinguished from the basic income maintenance provided by the welfare program.

We go on to review several formulas for rent assistance presently in use or seriously proposed, examining each in terms of its impact on family budgets. None seems to remedy the sharp disparity between the level of living available to welfare clients in New York City and that available to the poorest of unassisted families dependent on earned incomes. In order to afford even rent-assisted housing under these formulas, families dependent on the earnings of one employed member getting the minimum full-time wage must spend less for other goods and services than is allowed to welfare clients for this purpose. Whether the issue is regarded as a question of hardship, as a question of equity, or as a question of motivating welfare clients to seek employment, the use of these formulas for rent assistance strikes us as a major defect in the City's social welfare policies.

We also show that existing programs of rent assistance have this effect in large part because they are premised on an unnecessarily high standard of housing quality, i.e., on the provision of new dwelling units for assisted families. The cost of this standard, even after substantial tenant contributions, is so high that no public body has ever been willing to vote the funds to support more than token programs

accommodating only a small fraction of those families nominally eligible to participate.

A general program of housing assistance for low-income families need not embody the high-quality housing associated with existing token programs, nor need it place so great a strain on family budgets as these programs do. The last part of Ch. VII explores housing and rent-assistance standards appropriate to such an alternative program and Ch. VIII offers order-of-magnitude estimates of the numbers of eligible families and of program costs. Whether such an alternative ought to be adopted by the City is a question beyond our competence to decide. We only mean to stimulate public discussion by posing the alternative in sufficiently concrete terms so that its fiscal implication can be perceived.

To summarize, this volume moves from a strictly factual analysis of the incomes and housing expenditures of New York City's residents, through topics requiring subjective judgments that can be allowed for as such, and finally to the brink of advocacy. The reader may come with us as far as he likes; even if he stops with Ch. V, we think he will be better prepared to judge the issues of housing policy that will face New York City during the next few years.

* * *

A study of this kind requires presentation of a great many statistics derived by complex manipulations, often from obscure sources. These derivations must be documented for specialists who may wish to make further use of the data, but they need not be inflicted on the general reader. In the text of this volume, we have kept the tables simple and substituted graphics wherever possible. We tell the reader in a general way how the data were obtained and caution him about any important limitations they may have for the purposes at hand.

More complete documentation is presented in a series of technical appendices, one for each chapter except the first, at the end of the volume. Every chart in the text is based on an appendix table from which values can be read more exactly and which carries a full account of sources and methods. Statistics cited in the text or presented there in condensed tabular form are often amplified in appendix tables. The reader in search of precision or of sources, or who is interested in our statistical methods, will do well to check the technical appendices rather than relying entirely on the text presentation.

There are a number of commonly used terms in the text and tables which also have restricted technical definitions—for instance, "rooms," "housing units," "income," "family," "household." We have tried to warn the reader of the restricted definition when such a term is introduced, but it is not practical to repeat the warning each time the term appears. The reader will also encounter technical terms that are obviously such—"multiple dwelling," "sub-family," "contract rent." These also are defined when introduced, but it is worth noting that the common-sense interpretation is not always correct. For example, a "multiple dwelling" consists of three or more housing units in a single structure, rather than two or more.

In one case, we have been deliberately lax in terminology. The Bureau of the

Census draws a distinction between "households" and "families" which we are careful to observe in any context where it matters. Where the difference is unimportant, we use the terms interchangeably to avoid cumbersome phrases, and even sometimes lump persons living alone in the general category of "families" to avoid mentioning them separately as "unrelated individuals."

II. POPULATION CHANGES AND HOUSEHOLD FORMATION

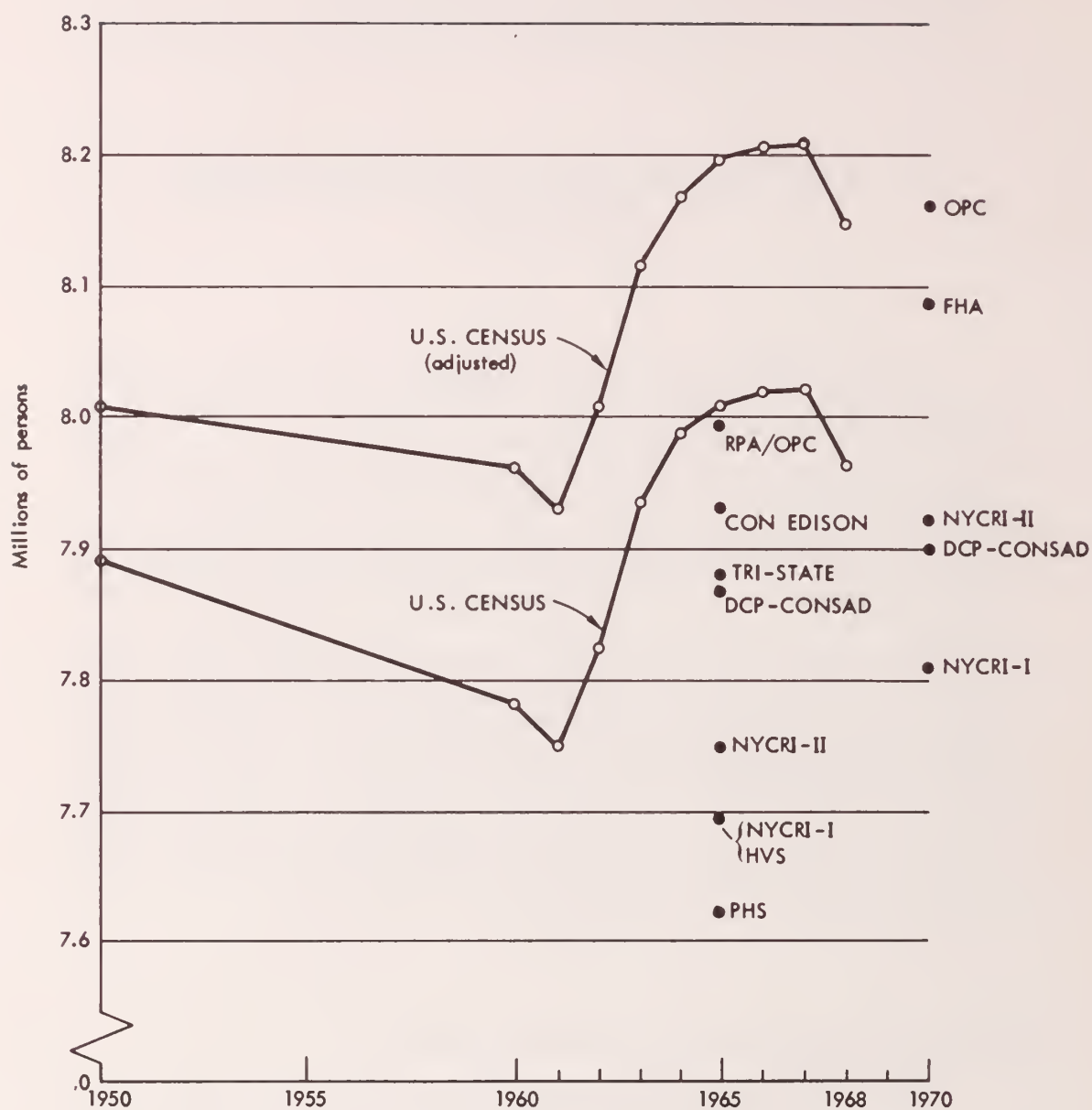
Despite considerable growth in the population of its suburbs and environs, New York City's population has changed very little in size since 1950. This apparent stability, however, masks offsetting movements of people into and out of the City, movements that have substantially altered the City's overall ethnic composition and consequently its social and political structure. Whole neighborhoods have experienced almost complete ethnic turnover, and this has had considerable impact on local housing markets. Equally important are trends in family composition and living arrangements that reflect, city-wide, in the types and quantities of housing demanded.

This chapter documents the major features of demographic change in New York City since 1950, emphasizing population size, patterns of migration, ethnic changes, and the emerging patterns of household formation and living arrangements. Our choices of emphasis were, of course, dictated by our interest in housing issues. Other characteristics of the City's population that are particularly important from this point of view are its economic status and its age/sex composition. Chapter III deals with trends in family and household incomes. We omit an analysis of trends in age/sex composition because post-1960 data on these subjects are inadequate to support current estimates in critical detail.¹

HOW MANY PEOPLE LIVE IN NEW YORK CITY?

Figure 1 summarizes the conflicting evidence and opinions about the size of New York City's population and the trends of change since 1950. If the various estimates for 1965 and 1970 are given equal weight, a reasonable conclusion would be that the number of inhabitants has not changed appreciably over the past 20 years and may currently be anywhere between 7.6 and 8.2 million persons.

¹ Since this chapter was written prior to publication of the 1970 Censuses of Population and Housing, we were forced to rely on a variety of intercensal surveys for evidence of trends and patterns after 1960. Considerable effort went into sifting these source materials, described in Appendix A, and into reconciling



SOURCE: Appendix Table A-1.

Fig. 1—Estimates and projections of the population of New York City, 1950-1970

That more-or-less expert estimates of the City's current population have a range of 600,000 persons—enough to fill Pittsburgh, Pennsylvania—may come as a surprise. To put it in perspective, we should note that the highest estimate for 1965 is but 108 percent of the lowest estimate; the range of 1970 estimates is even smaller. In any event, the critical issue for most purposes is not more accurate estimates of the absolute size of the City's population, but the direction of trends. The housing problems associated with population growth are different from those associated with population decrease.

The only occasions on which the residents of New York City are systematically and "completely" counted are the decennial censuses. These are not especially accurate compared with sample censuses, but their biases are better understood and they offer a wealth of demographic and socioeconomic detail that helps to explain changes in the number of inhabitants. Underenumeration in the decennial census is substantial in the case of persons whose living arrangements are irregular or impermanent. According to collateral evidence for the nation as a whole, urban nonwhites may be underenumerated by as much as 15 percent.²

The left-hand portion of Fig. 1 shows the published census counts for 1950 and 1960, together with our adjustments for underenumeration. The published figures indicate a 1950 population of 7.9 million persons and a net loss of about 110,000 during the following decade. Our adjustment for underenumeration raises the 1950 figure to about 8.0 million and reduces the subsequent loss to 40,000.

For years after 1960, we show the Bureau of the Census's annual estimates of the City's population. These are essentially modifications of the 1960 count, guided by subsequent data on births, deaths, housing construction, and school enrollment. We also show our adjustment of these estimates for underenumeration.

For 1965 and 1970, Fig. 1 also shows estimates and projections from a variety of sources. (Other estimates for intervening years and a fuller description of sources are presented in Appendix Table A-1.) All of these estimates are subject to the underenumeration biases of the decennial census and therefore should be compared with the published rather than the adjusted census figures for 1950 and 1960.

The estimates for 1965 fall into two groups, one clustered around 7.9 million persons and the other clustered around 7.7 million. Those in the upper group, including the Census Bureau's figure of 8.0 million, are all modifications of the 1960 count, either by trend extrapolation or by some combination of symptomatic indicators of change between 1960 and 1965. In the lower group, the estimates are based on current field surveys that are independent of 1960 benchmarks: the Housing and Vacancy Survey of 1965 conducted by the Census Bureau and the Population Health Survey of 1965 conducted by the Center for Social Research, City University of New

incomplete or conflicting evidence to reach conclusions that were important for our analysis of housing issues in subsequent chapters. As we go to press, advance reports on general population and housing characteristics for New York City in 1970 have just become available (U.S. Bureau of the Census, *1970 Census of Population: General Population Characteristics*, Advance Report PC(V2)-34, February 1971; and *1970 Census of Housing: General Housing Characteristics*, Advance Report HC(V1)-34, February 1971). While we have not altered text or tables to reflect these new data, we have added footnotes on items of interest.

² See U.S. Bureau of the Census, *Accuracy of Data on Population Characteristics as Measured by CPS-Census Match*, Series ER-60, No. 5, 1965, Table 8.

York.³ Our own estimates are also shown; the one marked NYCRI-I is identical with that of the Housing and Vacancy Survey; the other, marked NYCRI-II, is based on the Population Health Survey of 1964.⁴

We chose to base our analyses and projections on these two surveys for several reasons. Although their field work was mutually independent, their findings are in close agreement; moreover, they offer circumstantial detail that enables us to compare the structure and characteristics of the 1965 population with that recorded by earlier decennial censuses, a useful check on demographic plausibility. However, it should be noted that the Housing and Vacancy Survey was stratified to yield accurate estimates of the rental vacancy rate rather than accurate estimates of total population. The Population Health Survey is based on a small cluster sample (5,500 interviews), and we think that it undersamples unrelated individuals even more seriously than the decennial census. (The NYCRI-II estimate compensates for this presumed undersampling.)

Projections to 1970 range from 7.8 million to nearly 8.2 million. Our own are based on trend extrapolations of the numbers of households by size (NYCRI-I) and of the numbers of unrelated individuals and families by size (NYCRI-II). The former takes into account evidence from the 1968 Housing and Vacancy Survey and the latter takes into account evidence from the 1969 Current Population Survey, both indicating an apparent increase in the number of households and families of five or more persons, reversing the trend observed in the first half of the decade.⁵ These methods lead to conclusions very close to those of the Department of City Planning. The projections by the Federal Housing Administration and the State Office of Planning Coordination seem most consistent with the trend in the Census Bureau's annual estimates for 1960-1965. After 1965, however, the Census Bureau's estimates level off, turning downward in 1968; if continued to 1970, the new trend would approach the NYCRI and Department of City Planning projections for that year.

We think it a safe bet that the 1970 Census will report a total population for New York City between 7.8 and 8.0 million persons.⁶ There are no foreseeable reasons for rapid growth after 1970. For our purposes, the principal implication of this view of the near future is that growth in market demand for housing services in New York City will depend on rising incomes and changing preferences for living arrangements rather than on population growth.

MIGRATION AND ETHNIC CHANGE

In the course of a decade, the turnover of New York City's population is immense. Between 1950 and 1960, 1.6 million persons were born in the City and

³ These surveys systematically excluded certain portions of the City's population. The points plotted in Fig. 1 reflect our adjustments to compensate for these exclusions. See Appendix Table A-1 for further details.

⁴ We used the 1964 rather than the 1965 survey because detail on family composition was available for the former year.

⁵ See Appendix Tables A-3 and A-4.

⁶ The advance figure from the 1970 Census of Population is 7,868,000 persons.

850,000 died here; about 2.5 million persons left the City and over 1.5 million moved here from elsewhere in the United States and abroad. Although the number of inhabitants changed very little during the decade, only about 60 percent of the 1960 residents were also residents in 1950.

The turnover due to migration is particularly important because it offers the possibility of abrupt changes in population characteristics: immigrants may differ from outmigrants in age/sex distribution, cultural background, and economic status. This has indeed been true in New York City. Because movements of people into and out of the City are not recorded at the time they occur, most of our information about these flows is indirect or else deduced from observed changes in the population between two census enumerations. Here, we will try to show how recent migratory movements have affected the ethnic composition of the City's population.

Table 1 shows estimates of the components of change in New York City's population by ethnic group since 1940. The data for 1940-1950 and 1950-1960, prepared by the Department of City Planning, are reliable; net changes in the numbers of inhabitants of each ethnic group are obtained by comparing successive decennial census enumerations, and natural increase is calculated from recorded births and deaths. Subtracting the natural increase from the net change leaves a residual attributable to net migration, with negative numbers indicating net outmigration. The migration estimates for 1960-1965 are less reliable because the net change figures were obtained by comparing the population estimates of the Population Health Survey for 1965 with those of the 1960 Census of Population, and these two sources appear to have somewhat different biases. Any error in the net change estimate will produce an equal and opposite error in the net migration estimate.

The table shows a large net outflow of white non-Puerto Ricans, accelerating from about 50,000 persons per year between 1940 and 1950 to a current rate of 150,000 annually. Over the 25 years covered by the table, the City has lost about 2.5 million white residents through net outmigration. As a resident white population has dwindled, replacement of the outmigrants by natural increase among remaining whites has also dwindled. The current rate of decline in the white population is about 3 percent per year.

For nonwhites and Puerto Ricans, the amounts of net immigration are also large, especially in view of the small initial population of these groups, and growth from net immigration is supplemented by high rates of natural increase among those who have arrived. In a period of 25 years, the nonwhite population of the City grew from 471,000 to over 1.4 million; the Puerto Rican population grew from 77,000 to nearly 830,000. In both cases, about 60 percent of this growth is directly attributable to net immigration.

There have been many ethnically specialized waves of immigration in New York City's history; indeed, the present population of "whites" is largely composed of European immigrants and their first- and second-generation descendants: Irish, Italians, German and Russian Jews, etc. But usually the newcomers have *increased* the City's population; this is the first time to our knowledge that immigrants have *replaced* residents on such a city-wide scale. Most of the departing whites have

Table 1
POPULATION CHANGE BY ETHNIC GROUP: NEW YORK CITY, 1940-1965

Year and Component	Thousands of Persons			
	White ^a	Nonwhite ^a	Puerto Rican	All Groups
1940: Number of inhabitants	6,907.3	470.9	76.8 ^b	7,455.0
1940-1950:				
Natural increase	472.2	67.8	7.3	547.3
Net migration	-489.4	217.3	161.8	-110.3
Net change	-17.2	285.1	169.1	437.0
1950: Number of inhabitants	6,890.1	756.0	245.9	7,892.0
1950-1960:				
Natural increase	371.7	184.1	151.9	707.7
Net migration	-1,208.8	176.4	214.8	-817.7
Net change	-837.1	360.5	366.7	110.0
1960: Number of inhabitants	6,053.0	1,116.5	612.6	7,782.0
1960-1965:				
Natural increase	98.1	130.0	111.0	339.0
Net migration	-761.1	161.6	105.1	-494.2
Net change	-663.0	291.6	216.1	-155.2
1965: Number of inhabitants	5,390.0 ^c	1,408.1 ^c	828.7 ^c	7,626.8 ^c

SOURCES: 1940-1960, [New York City Interagency] Committee on Housing Statistics, *Housing Statistics Handbook*, Fourth Edition, 1967, Tables VI-2 and VI-3; 1960-1965, Population Health Survey, Research Bulletin RB-P4-68, *Estimates of Population Characteristics, New York City, 1964-1965-1966*, 1968, Table IV; estimates of natural increase supplied by Evelyn Mann, Department of City Planning.

NOTE: Distributions may not add exactly to totals because of rounding.

^a Excludes Puerto Rican population; exclusion for 1940 based on estimates by the Department of City Planning.

^b Estimated by the Department of City Planning.

^c Adjusted to include allowance for military and institutional populations, in same numbers as in 1960.

remained within the metropolitan area; between 1955 and 1960, over 400,000 whites moved from the City to adjacent suburbs. (The reverse flow amounted to only 55,000.) Many, no doubt, moved for reasons that had nothing directly to do with the incoming blacks and Puerto Ricans, but there is too much contrary evidence to allow us to suppose that these two flows are unrelated.

The process of ethnic turnover is most traumatic at the neighborhood level. Typically, it involves peripheral expansion from a minority enclave into an adjoining area whose residents first try to stop the movement and then (if they are homeowners) try to sell before real estate values decline so they can move to a new

"safe" neighborhood. Despite the efforts of civic-minded institutions and of the City government itself, such a neighborhood seldom stabilizes until ethnic succession is virtually complete.

Table 2 shows how each of the five boroughs was affected by ethnic turnover between 1950 and 1965. Manhattan's population of blacks and Puerto Ricans changed very little during this time, but the borough lost at least 35 percent of its white residents, as commercial and institutional expansion displaced housing. The Bronx and Brooklyn both dropped from about 93 percent white to less than 69

Table 2
POPULATION BY BOROUGH AND ETHNIC GROUP: NEW YORK CITY, 1950-1965

Borough and Ethnic Group	Thousands of Persons			Percentage Distribution		
	1950	1960 ^a	1965 ^a	1950	1960 ^a	1965 ^a
Manhattan, total	1,960	1,681	1,481	100.0	100.0	100.0
White	1,557	1,049	843	79.4	62.4	56.9
Nonwhite	403	410	402	10.6	24.4	27.1
Puerto Rican	(b)	222	237	(b)	13.2	16.0
Bronx, total	1,451	1,410	1,376	100.0	100.0	100.0
White	1,352	1,068	905	93.2	75.7	65.7
Nonwhite	100	159	209	6.8	11.3	15.2
Puerto Rican	(b)	184	263	(b)	13.0	19.1
Brooklyn, total	2,738	2,605	2,559	100.0	100.0	100.0
White	2,525	2,055	1,767	92.2	78.9	69.0
Nonwhite	213	373	525	7.8	14.3	20.5
Puerto Rican	(b)	177	268	(b)	6.8	10.5
Queens, total	1,551	1,798	1,911	100.0	100.0	100.0
White	1,497	1,628	1,628	96.5	90.6	85.2
Nonwhite	54	152	235	3.5	8.5	12.3
Puerto Rican	(b)	17	(c)	(b)	0.9	(c)
Richmond, total	192	212	225	100.0	100.0	100.0
White	186	201	197	96.9	94.8	85.2
Nonwhite	6	9	(c)	3.1	4.1	(c)
Puerto Rican	(b)	2	(c)	(b)	1.1	(c)
All boroughs, total	7,892	7,706	7,552	100.0	100.0	100.0
White	6,890	6,001	5,338	87.3	77.9	70.7
Nonwhite	756	1,103	1,395	9.6	14.3	18.5
Puerto Rican	246	603	819	3.1	7.8	10.8

SOURCES: 1950, *U.S. Census of Population, 1950*; 1960-1965, Population Health Survey, Research Bulletin RB-P4-68, *Estimates of Population Characteristics, New York City, 1964-1965-1966*, 1968, Table IV.

NOTE: Distributions may not add exactly to totals because of rounding.

^a Excludes military personnel and persons in institutions.

^b Puerto Ricans not separately identified. Most would be classified as whites.

^c Insufficient data.

percent white with little change in total population. Queens and Richmond were almost entirely white in 1950 and are the only boroughs that did not subsequently lose part of their white populations; but by 1965, black and Puerto Rican immigrants made up 15 percent of the total residents of both boroughs.

The implications of these ethnic changes for the social structure and political organization of New York City are immense and only beginning to be visible. In 1940, nonwhites and Puerto Ricans comprised only 7 percent of the City's population. By 1970, we estimate that over a third of the City's residents belonged to one or the other of these minority groups, and they probably accounted for over half of the population of Manhattan.

TRENDS IN LIVING ARRANGEMENTS

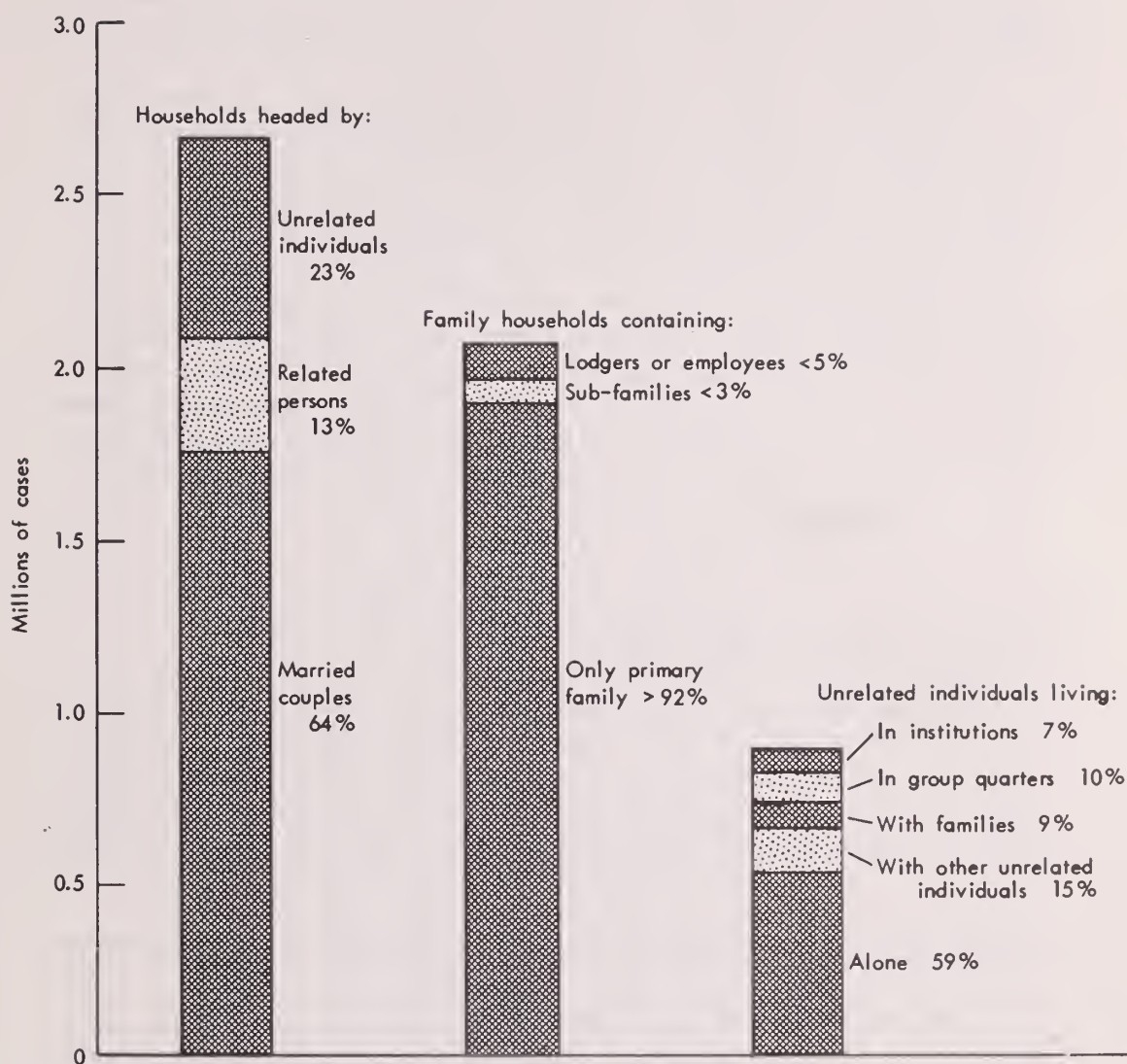
For a study of housing problems, the most relevant unit of population is not the individual but the household, a group of people who live and eat together.⁷ Most households consist exclusively of families, i.e., of persons related to each other by blood or marriage. But some include individuals (lodgers, employees) unrelated to anyone else in the household, and two or more unrelated individuals sometimes set up housekeeping together. Occasionally, two unrelated families share a housing unit.

The composition of households in terms of families and unrelated individuals is important because it provides clues to the prospects for household formation. During World War II, geographical shifts in population and a moratorium on most residential construction left many communities with a severe housing shortage. Two or more families frequently occupied a single housing unit, and many families took in lodgers. At the end of the war, these doubled-up families eagerly sought separate quarters, generating a strong demand for new housing. What is the situation today in New York City?

The last date for which we have a richly detailed picture of the living arrangements of the City's residents is 1960. These arrangements are summarized in Fig. 2. Of 2.6 million households, 77 percent were "family households" — i.e., headed either by a married couple or a person related to other household members (e.g., a widowed, divorced, or unmarried mother). The other 23 percent were headed by persons unrelated to any other household member.

Of the family households, fewer than 8 percent included lodgers, employees, or even related sub-families (e.g., a daughter and son-in-law). In brief, there was no significant amount of doubling up by families.

⁷ We follow the Bureau of the Census in the technical definition of a household. Its quarters must have either (a) direct access to a hallway or public area or (b) a kitchen or cooking equipment for the exclusive use of the occupants. Persons who do not live in households occupy group quarters such as rooming houses, dormitories, or custodial institutions.



SOURCE: Appendix Table A-2.

Fig. 2—Living arrangements in New York City, 1960

Of 877,000 persons who lived apart from relatives,⁸ 59 percent lived alone in quarters that met the Census Bureau's definition of a housing unit. Only 10 percent lived in group quarters; the other 24 percent either shared housing units with other unrelated individuals (about 15 percent) or lived with families as lodgers or employees (about 9 percent). Again, it is hard to discern any significant amount of involuntary doubling up among unrelated individuals.

Fragmentary evidence for years after 1960 suggests that increasing proportions of households consist of unrelated individuals and of related persons other than married couples; that among family households there are fewer with lodgers, employees, or related sub-families; and that among unrelated individuals, relatively fewer live in rooming houses and relatively more live alone.⁹

From these signs it is apparent that involuntary cohabitation of families with other families or of unrelated individuals with families is minimal. So, too, is the number of families living in rooming houses or in other makeshift group quarters. Even most unrelated individuals have their own apartments or houses, instead of sharing quarters with other unrelated individuals. "Doubling" in the usual sense is not a problem in New York City. As we will see below, however, there is a growing tendency for persons who, in the past, might have lived with relatives, to maintain separate establishments.

NET HOUSEHOLD FORMATION, 1950-1970

Despite lack of growth in total population, the number of separate households in New York City has increased from about 2.4 million in 1950 to about 2.8 million currently. This growth is largely attributable to a growing tendency for individuals who might otherwise live with relatives or in rooming houses to maintain separate establishments. The number of one-person households has increased from 291,000 in 1950 to about 700,000 currently.

⁸ This figure includes 814,000 "unrelated individuals" and 63,000 inmates of institutions. Although the latter are not actually included in the Census Bureau's definition of unrelated individuals, we have so described them in Fig. 2 in order to account for the entire population.

⁹ The advance report of the 1970 Census of Population confirms most of these impressions, as shown below:

	1960	1970
Households headed by:		
Married couple	64%	57%
Related person	13%	16%
Unrelated individual	23%	28%
Total	100%	100%
Unrelated individuals living:		
Alone	59%	66%
With others	24%	22%
In group quarters	10%	6%
In institutions	7%	6%
Total	100%	100%

(Percentages may not add exactly to totals because of rounding.)

Figure 3 shows the trends in numbers of households of each size, 1950-1968, together with our projections for 1970.¹⁰ The striking feature of this figure is that the only classes of households that are increasing substantially in numbers are those composed of one or two persons. In 1950, such households comprised 40 percent of the total; in 1960, 49 percent. We think that in 1970 they account for about 55 percent of all households. New York City—not just Manhattan—is rapidly becoming a community of single persons and couples.

For the most part, these are persons past middle age. Seventy percent of those living alone are over 45 and a third are over 65; nearly 60 percent are women. Increasingly, such persons are financially able to maintain separate establishments, and solitary housekeeping has been greatly simplified over the past 20 years by labor-saving appliances, new domestic services, and pre-processed foods. Young, single persons concentrate in Manhattan, where their high visibility gives a very misleading impression of their numbers; City-wide only about 4 percent of all persons living alone are under 25. Two-person households have much the same age-distribution as singles, but include relatively more young married couples and relatively fewer elderly couples.

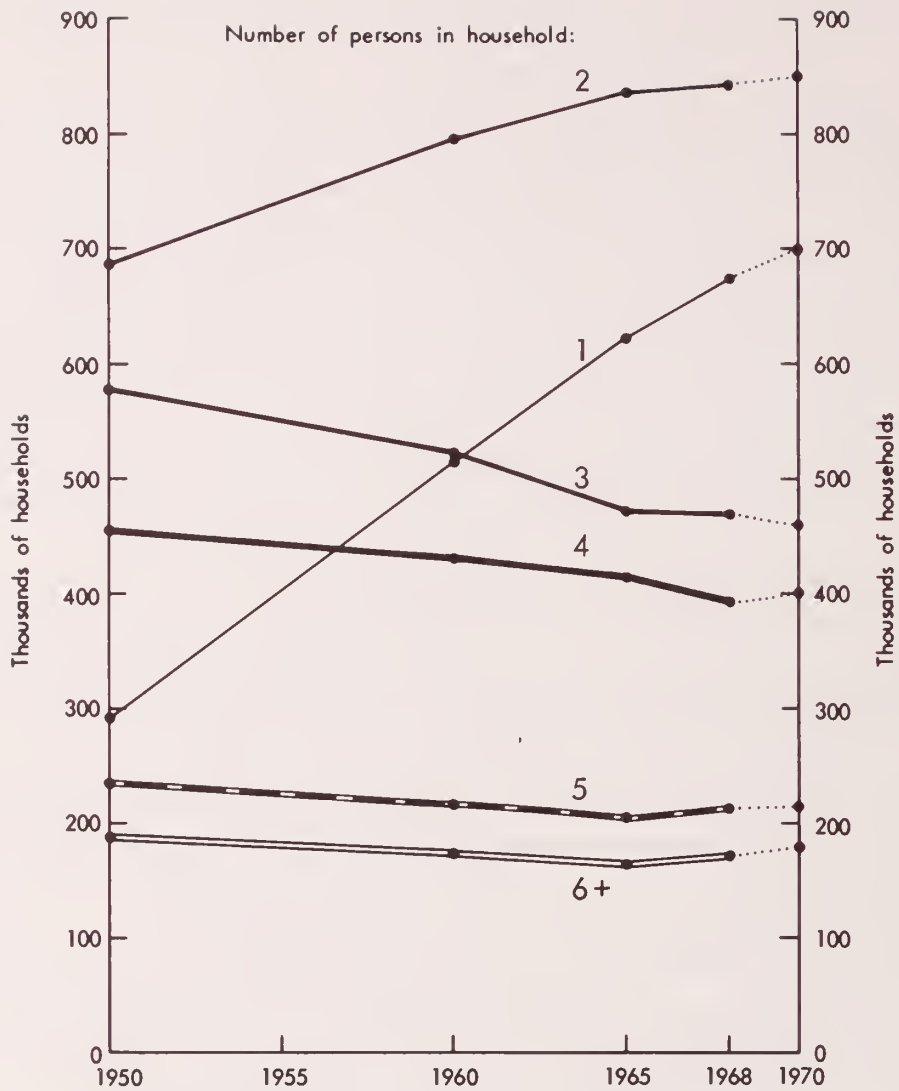
Households larger than two persons usually include children under 18. About 65 percent of all three-person households include at least one child, and the proportion rises to 90 percent or more for larger households. Not only has the number of childless households increased dramatically, but the number of those with children has been decreasing. Households of three or more persons diminished in number by 200,000 between 1950 and 1970. The rate of loss is lower for the larger households (21 percent for three-person households as against 4 percent for households of six or more persons), so that within this group there has been a slight but definite shift toward larger households.

This shift is at least partly a consequence of black and Puerto Rican immigration. Although these two groups comprised only 25 percent of all households in 1968, they accounted for 46 percent of all households of six or more persons. Puerto Rican households especially tend to be large. (See Appendix Table A-5.)

Table 3 shows that since 1950 the number of households in New York City has grown in every interval for which data are available, despite the declining

¹⁰ The trends shown in Fig. 3 are presented in numerical form in Appendix Table A-4, together with an accounting for persons not in households. As shown below, our trend projections to 1970 are generally confirmed by the advance report of the 1970 Census of Housing, our worst error being a 6-percent underestimate of the number of large households:

Household Size	Thousands of Households		NYCRI as Percent of Census
	NYCRI Projection	Census of Housing	
1	700.0	706.9	99.0
2	850.0	847.2	100.3
3	460.0	478.7	96.1
4	400.0	388.0	103.1
5	215.0	208.5	103.1
6+	180.0	191.9	93.8
All sizes	2,805.0	2,821.3	99.4



SOURCE: Appendix Table A-4.

Fig. 3—Trends in the numbers of households by size of household: New York City, 1950-1970

number of persons in households through 1965. The corollary, of course, is the drop in average household size shown in the last row of the table, from 3.15 persons in 1950 to an estimated 2.73 persons in 1970.

The annual rate of net household formation has fluctuated within a very narrow range over the past 20 years. Between 1950 and 1960, the number of households increased at an average rate of 22,000 per year. Between 1960 and 1965, the rate dropped to 13,000 annually. Between 1965 and 1968, it rose again to 16,000 annually. Our 1970 projection of 2,805,000 households implies annual increases of 19,000 between 1968 and 1970. Even if our figure for 1970 is reached, the average rate of increase for the decade as a whole will only amount to 15,000 annually, a compound growth rate well under 1 percent per year.¹¹

Table 3
NUMBER OF PERSONS IN HOUSEHOLDS, NUMBER OF HOUSEHOLDS,
AND AVERAGE HOUSEHOLD SIZE: NEW YORK CITY, 1950-1970

Item	1950	1960	1965	1968	1970 ^a
Thousands of persons in households	7,667	7,632	7,549	7,591	7,652
Thousands of households	2,433	2,655	2,720	2,767	2,805
Average household size	3.15	2.87	2.78	2.74	2.73

SOURCE: Appendix Table A-4.

^a Estimated by NYCRI.

We see no obvious reason to expect a substantially higher rate of growth in the 1970s. While the conceivable limits of family fragmentation have not been reached, the forces that gave it special significance in the last two decades are largely spent. The current age-distribution of the City's population, insofar as we can tell, does not imply a sudden upsurge in household formation.¹² The prospects for population growth through net immigration are equally dim. It seems safe to anticipate that net household formation during the 1970s will average 15,000 to 25,000 annually.

¹¹ According to the advance report of the 1970 Census of Housing, there were 2,821,000 households in New York City in April 1970, an increase of 166,000 over 1960. This corresponds to an average rate of increase for the decade of 16,600; for the period since the Housing and Vacancy Survey of 1965, 20,200 annually; and for the period since the Housing and Vacancy Survey of 1968, 27,000 annually. But see footnote 12, below.

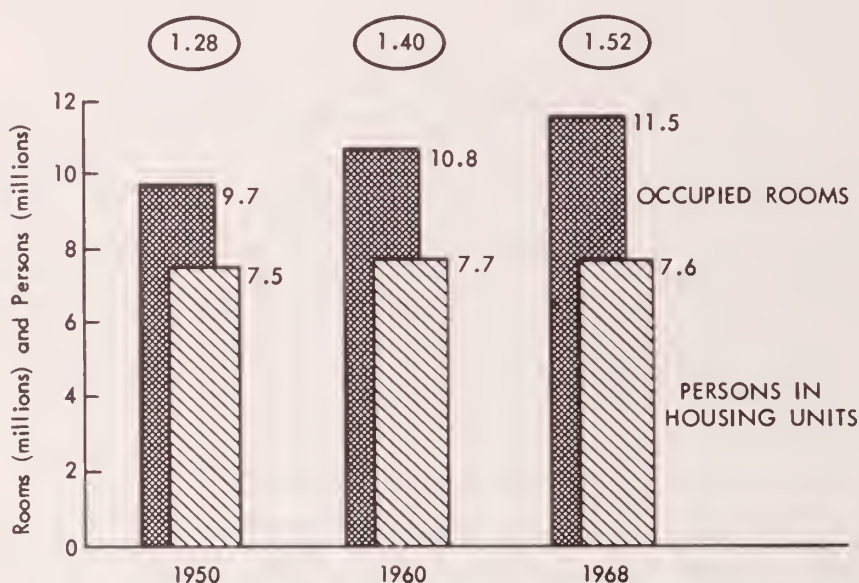
¹² The recent increase in net household formation discussed in footnote 11 was almost certainly due to an increase in the numbers of persons reaching marriageable age after 1965; these were the large birth cohorts of the period 1946 to 1950. However, the peak has probably been reached. The advance report of the 1970 Census of Population shows 356,000 females between ages 20 and 24 years (the ages at which first marriages are most common) but only 304,000 between ages 15 and 19 years. The two age-brackets have about the same number of males.

TRENDS IN SPACE USAGE

Between 1950 and 1968, the number of households in New York City increased by 14 percent. As we have seen, this increase was not matched by population growth, being instead accomplished by formation of increasing numbers of small households. As household size has declined, there has been a remarkable increase in per capita consumption of housing space as measured by the average number of rooms per person.

Figure 4 compares the number of rooms and the number of persons in occupied housing units in 1950, 1960, and 1968. While the City's inventory of occupied

ROOMS PER PERSON:



SOURCE: Appendix Table A-5.

Fig. 4—Trends in the use of housing space in
New York City, 1950-1968

rooms increased by 19 percent between 1950 and 1968, the number of persons living in these rooms hardly changed at all.¹³ Consequently, the number of rooms per person also increased by 19 percent, from 1.28 in 1950 to 1.52 in 1968.

¹³ As we have seen, post-1960 population estimates vary. However, our 1968 estimate of 7.6 million persons in households comes from the Housing and Vacancy Survey of that year, which is also our source for the estimated number of rooms. Any sampling bias would almost certainly affect both figures in about the same proportion, leaving the average number of rooms per person unchanged.

Detail for owner- and renter-occupied housing units is provided in Appendix Table A-6.

This increase in space consumption has been the real reason why the City has felt a continual "housing shortage" despite net inventory growth of 414,000 units between 1950 and 1968. With about the same number of persons and virtually the same vacancy rate in 1968 as in 1950, the City's households have absorbed 1.8 million additional rooms.¹⁴

We have already suggested that the basic reasons for the trend to separate living arrangements, particularly for elderly people, are rising incomes and simplified housekeeping. These created a demand for additional housing units that was met by the market at prices within the reach of many who might otherwise have continued to share quarters with relatives or friends. Of course, the process also involved chains of movement within the existing inventory as new units were occupied by those best able to afford them and their previous housing became available to others who were less affluent. And, as we shall see, rent control has encouraged the liberal use of space by holding down prices on most pre-1947 rental housing.

SUMMARY

The size of New York City's population has changed very little since 1950, fluctuating around 7.9 million. There has nonetheless been an immense turnover within that total, primarily due to in- and outmigration whose most striking consequence has been a rapid change in the City's ethnic composition.

The City has been losing white residents by net outmigration since at least 1940. During the 1950s, the loss amounted to 1.2 million persons, and the rate of loss has since increased. These population losses have been partially compensated for by large volumes of nonwhite and Puerto Rican immigration, the rate increasing through 1965 though it may have since leveled off or declined.

Net immigration of nonwhites and Puerto Ricans, supplemented by their high birth rates, has increased the combined share of these two ethnic groups in the City's population from 13 percent in 1950 to about 33 percent in 1970. Most of the newcomers have settled in the Bronx and Brooklyn, replacing whites whose exodus from these boroughs is at least partially a response to the presence of the newcomers. Manhattan's nonwhite and Puerto Rican populations have grown very little, although the white population has declined substantially as commercial and institutional expansion has reduced the island's housing stock. Queens and Richmond still have few nonwhite and Puerto Rican residents.

¹⁴ The advance report of the 1970 Census of Housing shows a total inventory of 2,901,000 housing units, excluding seasonal accommodations. This figure implies a net gain of 468,000 units since 1950, and 54,000 units since the Housing and Vacancy Survey of 1968. The latter figure appears to be inconsistent with the City's data on housing construction, demolition, conversions, and mergers, which suggest a net increase in the standing stock of no more than 15,000 units between the two surveys. The discrepancy cannot be resolved until more detailed tabulations for 1970 are released by the Bureau of the Census.

Substituting 1970 census counts for the 1968 figures shown in Fig. 4 does not materially change the trend shown there. According to the census advance report, in 1970 there were 7,741,000 persons living in housing units which contained 11,642,000 rooms, or 1.51 rooms per person.

During the past 20 years, New York has shared with most of the nation's central cities the trauma of ethnic turnover, at best an uncomfortable process and at worst an ugly one. Peripheral expansion of black and Puerto Rican ghettos usually frightens the residents of adjoining neighborhoods into resistance or flight. Between 1955 and 1960, over 400,000 whites moved from the City to adjoining suburbs, the reverse flow amounting to only 55,000. Despite the efforts of civic-minded institutions and the City government itself, a changing neighborhood seldom stabilizes until ethnic succession is virtually complete.

In the process, the neighborhood's housing often suffers severely from damage and neglect, the consequences of financially unsound transactions, low rent-paying ability of new tenants, transplantation of rural habits of life to a high-density environment, landlord-tenant hostility, and the withdrawal of institutional financing.

These issues are examined elsewhere in this series; suffice it to note here that the trauma of neighborhood turnover will be a fixture of life in New York City during the 1970s. Although the streams of nonwhite and Puerto Rican immigration may shrink, the current rate of their natural increase alone would cause these two ethnic groups to grow in numbers by 25 percent over the next decade.

Despite the lack of growth in total population, the number of separate households in the City grew from 2.4 million in 1950 to 2.8 million currently. The increase consists entirely of one- and two-person households, which now account for about 55 percent of the total. Most of these consist of individuals or couples past middle-age. At least 70 percent of those living alone are over 45 and at least a third are over 65; nearly 60 percent are women. Young single persons concentrate in Manhattan, where their high visibility gives a very misleading impression of their numbers; City-wide, only about 4 percent of all persons living alone are under 25.

The number of larger households (three or more persons) has decreased by 200,000 since 1950, most of the decrease consisting of three- and four-person households. There are some indications that during the past few years households of five or more persons have been increasing in numbers due to the prevalence of large families among the City's growing population of nonwhites and Puerto Ricans.

The trends toward separate living arrangements for single persons and elderly couples reflects increasing prosperity and simplified methods of housekeeping. It accounts for New York City's continuing housing shortage despite an added 414,000 housing units between 1950 and 1968. During this interval, the City's residents absorbed 1.8 million additional rooms with no significant change in population, for a 19-percent increase in space consumption per capita.

We do not see any reason to expect substantial growth in New York City's population during the next few years. Consequently, we envisage a demand for no more than 15,000 to 25,000 housing units annually, net of replacement, to accommodate household formation by persons who prefer and are financially able to live apart from relatives. Production above that number will necessarily compete with existing housing, much of which could certainly stand replacement.

III. INCOMES AND LEVELS OF LIVING

The economic circumstances of the residents of New York City are often misrepresented in discussions of the City's problems. In part these misrepresentations are merely careless generalizations from personal or official experiences that expose one to the life-style and budgetary problems of a limited group of residents. In part they derive from the scarcity of systematic and reliable data on the incomes of all residents. Finally, even those who do base their views on systematic data find these data difficult to translate into simple and unequivocal generalizations.

In this chapter we present much of the available data on changing levels and distributions of income among the residents of New York City during the period 1950 to 1969 and try to reconcile the contradictory findings of various surveys. We show how incomes vary with family or household size and living arrangements, and explore the expanding role of public assistance as a source of income for the City's residents. We also try to show what these data mean in terms of the levels of living available to the City's residents.

Although this study is primarily concerned with the rental housing market and with the household as the consumer unit in that market, some of the income data presented here are for unrelated individuals and families rather than for households, and, in general, cover all New Yorkers, whatever their living arrangements. We report incomes for unrelated individuals and families because the alternative would be to slight an important data source. By presenting income data for all residents, we are able to make use of sources that do not distinguish renters, and also to provide a needed perspective on the incomes of renters, who are treated separately in the last two sections of the chapter.

As noted in Ch. II, a "family" is defined by our census sources as a group of related persons living together. Anyone except an inmate of an institution who does not live with at least one relative is an "unrelated individual." But more than one family, a family and one or more unrelated individuals, or several unrelated individuals may share a single housing unit. To the extent that these combinations occur, our data on incomes of families differ from data on the incomes of households of two or more persons, but such combinations are rare except for two-person households consisting of unrelated individuals. In these cases, household income is

underreported by our sources, which include only the incomes of the head of the household and persons related to the head.

One-person households, however, account for only about two-thirds of all unrelated individuals, so that there is room for substantial differences in income distribution between the smaller and the more inclusive group. Those unrelated individuals who do not form one-person households either live with others in housing units, or live in rooming houses or dormitories whose inhabitants are not treated by our sources as members of households.

We will use the Bureau of the Census's definition of "annual income"; it includes all cash received by family members during the year from employment for others, and the net receipts or profits of self-employment. It also includes income from property or savings (rents, dividends, interest, annuities, retirement benefits, etc.), transfer payments from government (pensions, Social Security benefits, unemployment compensation, public assistance, etc.), and regular cash contributions from persons who are not members of the immediate household. It excludes income-in-kind (e.g., rent-free housing, free medical care), previous savings spent during the year, and lump-sum inheritances, gifts, or insurance payments. Our sources report *gross* incomes, prior to deduction of Federal, State, and City income or Social Security taxes.

For many purposes of public policy, it is important to distinguish incomes derived from wages, self-employment, or property from other kinds of income, and particularly to distinguish transfer payments made from the public treasury to those who, for various reasons, are unable to support themselves.¹ Our sources on all incomes do not permit us to make these distinctions, but we do have separate data on one particularly important kind of transfer, public assistance payments, and are able to show its role as a source of support for the City's residents.

It is far from easy to gather good data on personal and family incomes by interview. Some persons are reluctant to divulge their incomes to the interviewer. Those who are willing to discuss them usually rely on memory rather than on records; ordinarily, one person responds on behalf of all family members and that person may be poorly informed. Respondents tend to overlook minor or irregular sources of income, and often do not understand the comprehensiveness of the concept.

Some of these difficulties can be overcome by skilled and detailed questioning, as in the Current Population Survey of the Bureau of the Census. Even here, however, it is estimated that about 13 percent of all personal income is unreported.² If this fraction were constant for all respondents and in all surveys, it would not be much of a problem for the analyst; but the training of interviewers and the amount

¹ The line between earned incomes, property incomes, and transfer payments is ambiguous. Annuities, pensions, Social Security benefits, and unemployment compensation are all at least partly paid for by the beneficiary out of previous earnings, or by his employer as a tax or fringe benefit; but the connection between contributions and benefits may be quite loose, as it is under the Social Security program. Public assistance (welfare) payments are the clearest form of transfer, funded entirely out of the general revenues of the contributing governments.

² U.S. Bureau of the Census, *Current Population Reports*, Series P-60, No. 66, "Income in 1968 of Families and Persons in the United States," p. 10.

of detail requested vary among surveys, making it perilous to compare their findings. This turns out to be a critical issue in the measurement of income changes after 1960.

Another problem arises when income data for different years are to be compared. During the period with which we are concerned (1950-1969), money incomes increased substantially, but so did the prices of most consumer goods and services. To see what happened to *real* incomes, it is necessary to adjust reported money incomes to dollars of constant purchasing power. We have made such adjustments to the income data in this chapter when comparisons over time are made, using the Consumer Price Index for New York City as a measure of changes in purchasing power.

Another problem arises when incomes of families or households of different sizes are compared: a small family can live better on a given income than a large one. There are two ways around this difficulty. One is to show the distribution of income separately for each family size. We have done this, but the reader may find (as we do) that it is not easy to generalize from so many simultaneous comparisons. To simplify and sharpen our conclusions, we have devised a method for translating the incomes of families of various sizes to level-of-living equivalents for a family of four persons. The results of such a translation for renter households, the group in which we are most interested, are presented in the last section of this chapter.

INCOMES OF UNRELATED INDIVIDUALS AND FAMILIES, 1950-1969

In 1967, the Current Population Survey of the U.S. Bureau of the Census increased the size of its annual sample surveys of population characteristics. It now includes nearly 2,900 New York City households in its national sample, enough to permit reliable estimates of the distribution of incomes within broad categories of income recipients. This new source of data is rather important because of its quality; compared with other income surveys conducted by the Bureau of the Census and by local enterprises such as the Population Health Survey, the Current Population Survey is noteworthy for careful questioning of respondents by well-trained interviewers.

Table 4 shows the findings of the 1969 Survey with respect to the distribution of incomes for unrelated individuals and for families by size.³ At the bottom of the

³ For budgetary reasons, the Bureau of the Census does not publish these data for individual cities. With commendable alertness, the Center for New York City Affairs of the New School for Social Research noted the increase in sample size and joined with Urban Coalition Jobs to purchase a special tabulation of the income data gathered for New York City in the March 1969 Survey. Our access to this tabulation is by their courtesy.

A table similar to our Table 4, based on these data, has been published in an article by Blanche Bernstein, "Welfare in New York City," *City Almanac*, Center for New York City Affairs, New School for Social Research, Vol. 4, No. 5, February 1970. (Our data are grouped differently and we followed different rounding procedures.) Miss Bernstein also generously permitted us to study her manuscript, "The Distribution of Income in New York," based largely on this special tabulation. A revised version of this manuscript has since been published in *The Public Interest*, No. 20, Summer 1970.

Table 4

PERCENTAGE DISTRIBUTION OF UNRELATED INDIVIDUALS AND FAMILIES BY INCOME
IN 1968 DOLLARS, BY SIZE OF FAMILY: NEW YORK CITY, 1969

Income in 1968 Dollars ^a	Percentage Distribution, by Number of Persons per Family						
	1 ^b	2	3	4	5	6+	Total
Under 2,000	34.2	7.3	4.4	3.9	(c)	1.8	14.1
2,000-3,999	23.1	17.4	7.9	9.5	9.6	9.8	15.8
4,000-5,999	15.2	16.1	13.1	16.2	16.0	14.0	15.1
6,000-7,999	11.8	17.7	15.3	12.3	10.1	16.5	14.4
8,000-9,999	6.9	9.9	15.5	13.2	14.4	18.3	11.1
10,000-11,999	3.7	9.3	10.0	11.8	15.4	13.4	8.6
12,000-14,999	2.0	10.9	17.9	8.9	14.9	13.4	9.5
15,000 or more	3.1	10.9	15.5	23.2	17.6	12.9	11.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median income	\$3,380	\$ 7,020	\$ 9,050	\$ 9,100	\$10,000	\$ 8,860	\$ 6,070
Interquartile range	4,780	7,100	7,140	9,370	7,530	5,810	7,460
Upper limit	6,400	11,150	13,080	14,700	13,480	11,850	10,880
Lower limit	1,620	4,050	5,940	5,330	5,950	6,040	3,420

SOURCE: Special tabulations by the Bureau of the Census of data from the Current Population Survey of March 1969 (by courtesy of the Center for New York City Affairs and Urban Coalition Jobs). The sampling rate was 0.1 percent.

NOTE: Distributions may not add exactly to totals because of rounding in the source tables. Median and quartile incomes were estimated by graphic interpolation on cumulative frequency distributions within \$1,000 income intervals.

^a Reported income for calendar 1968.

^b Unrelated individuals, excluding persons in institutions.

^c Less than 1 percent.

table, we show some useful summary statistics: the median income and the interquartile range. The median income is the value that divides the population into two equal groups, half receiving less and half receiving more than the median. The interquartile range measures the compactness of the distribution; it encompasses half the cases below the median and half the cases above it, i.e., the middle 50 percent of all cases.

These income distributions are remarkable in at least two respects: the very low incomes reported by unrelated individuals and the very high incomes reported by families of three or more persons. Well over half of all unrelated individuals reported incomes under \$4,000, and well over 40 percent of all families of three or more persons reported incomes of \$10,000 or more. Two-person families partake of both extremes, with nearly a fourth reporting incomes under \$4,000 and nearly a third reporting incomes of \$10,000 or more.

These differences by family size reflect mostly the difference between earnings from full-time employment and incomes derived from part-time employment, pensions, Social Security, or public assistance. While precise current data for New York City are not readily available, it is safe to say that over 90 percent of all

families of three or more persons include at least one full-time worker and 35 to 40 percent include two or more. By contrast, only about half of all unrelated individuals report incomes from current employment. Two-person families include many young couples, one or both employed, but they also include many retired couples as well as mother-and-child families dependent on alimony or public assistance.

The general prosperity shown by these data is impressive. To put it in perspective, we should note that it is matched—even surpassed—in other large cities. Table 5 compares New York's median incomes with those of the central cities and suburbs of all Standard Metropolitan Statistical Areas (including the New York SMSA) in 1969. Both unrelated individuals and families of two or more persons in the larger SMSAs report higher incomes than their counterparts in the smaller SMSAs, and suburban incomes are higher than those of the central cities. New York City's unrelated individuals do as well as or better than their central-city counterparts elsewhere, but families here have slightly lower median incomes than those in other central cities.

Table 5
COMPARISON OF MEDIAN INCOMES OF UNRELATED INDIVIDUALS AND FAMILIES:
NEW YORK CITY AND OTHER METROPOLITAN AREAS, 1969

Type of Recipients	Median Income in 1968 Dollars, by Area				
	New York City	Small SMSAs ^a		Large SMSAs ^b	
		In Central Cities	Outside Central Cities	In Central Cities	Outside Central Cities
Unrelated individuals	\$3,380	\$2,815	\$2,797	\$3,413	\$ 3,798
Families, all sizes	8,230	8,298	9,305	8,617	10,842

SOURCES: Appendix Table B-1 and U.S. Bureau of the Census, *Current Population Reports*, Series P-60, No. 66, Table 11.

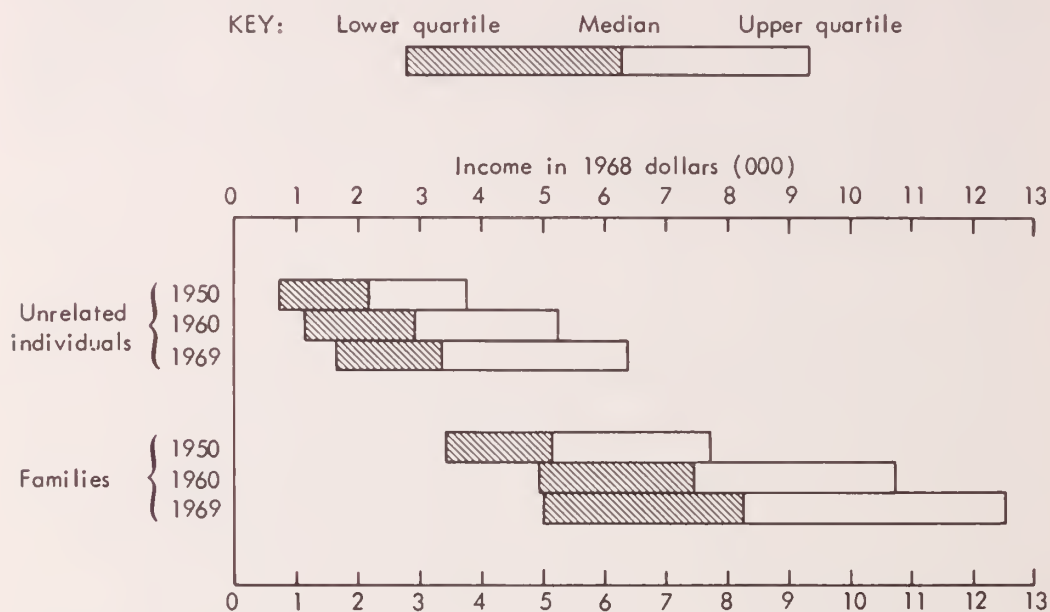
^a Standard Metropolitan Statistical Areas with 1960 populations under one million persons.

^b Standard Metropolitan Statistical Areas with 1960 populations of one million persons or more, including the New York SMSA.

Another helpful perspective is provided by comparing the incomes reported in the 1969 Current Population Survey with those reported by the 1950 and 1960 Censuses of Population. This is done in Fig. 5, again combining all families of two or more persons into a single group. Here, we have adjusted the incomes reported for 1949 and 1959 to dollars of 1968 purchasing power, so that the comparisons are in terms of real incomes.⁴

⁴ The Consumer Price Index for New York City rose by 47.6 percent between 1949 and 1968, and by 21.7 percent between 1959 and 1968.

On the basis of these comparisons, the decade of the 1950s appears to be a sort of Golden Age for residents of New York City. For unrelated individuals, the median real income increased by 35 percent; for families, it increased by 44 percent. While the dispersion of incomes around the median increased for both groups, relatively few people were left behind; the lower limit of the interquartile range increased by 59 percent for unrelated individuals and by 43 percent for families.



SOURCE: Appendix Table B-1.

Fig. 5—Trends in real incomes of unrelated individuals and families: New York City, 1950-1969

Real incomes grew much less during the 1960s. Comparison of the data from the 1969 Current Population Survey with data from the 1960 Census of Population indicates that the median real income of unrelated individuals only rose by 15 percent, that of families by 11 percent. Furthermore, we think that these comparisons overstate changes during the 1960s. The reason for this belief is that the interviewers of the 1969 Current Population Survey were more thorough than those of the Census of Population, inquiring in detail about secondary sources of income for each adult family member. Other evidence, discussed below, supports this a priori conclusion.

INCOMES OF HOUSEHOLDS, 1960-1968

Our principal reason for examining the incomes of unrelated individuals and families was the availability of new and especially good data for a recent year. For our purposes, *household* incomes are more pertinent as indicators of the joint resources of a group of persons occupying a housing unit, or would be except that our sources do not include in a household's income the income of persons living in the household who are not related to its head. In any event, the incomes reported for households of a given size tend to be only slightly lower than those reported for families of the same size, since few households contain income recipients who are nonrelatives of the head. The exceptions are one-person households, whose incomes tend to be higher than those of all unrelated individuals. This is not surprising: the more prosperous unrelated individuals are more likely to live alone in a housing unit.⁵

Our data on household incomes by size of household come from the 1960 Census of Housing and from the Housing and Vacancy Surveys conducted in New York City by the Bureau of the Census in 1965 and 1968. Compared with the 2,900 interviews that make up the Current Population Survey's New York City sample, the Housing and Vacancy Surveys are large: about 36,000 interviews. This means that their data can be analyzed in much finer detail without encountering serious problems of sampling variability. A further convenience is that interview procedures with respect to income were virtually identical to those of the 1960 Censuses of Population and Housing, suggesting that about the same fractions of actual income would be reported by respondents in the Housing and Vacancy Surveys and in the decennial census.

Offsetting these conveniences is the fact that many of those interviewed in the Housing and Vacancy Surveys declined to respond to the age and income questions. Whereas about 8 percent of those asked to report their incomes in 1960 failed to do so, nonresponse rates for the Housing and Vacancy Surveys were 35 percent in 1965 and 42 percent in 1968. One reason for the difference is that in such special surveys the Bureau of the Census does not have the statutory authority granted to the decennial census to require answers, a fact made clear to those interviewed. (The Current Population Survey, under a similar disability, nonetheless keeps its nonresponse rate low by establishing greater rapport in repeated interviews with a permanent panel of households.) Moreover, those interviewed by the Housing and Vacancy Surveys were treated as nonrespondents to the income question if entries were missing from any of the ten blanks provided in the field sheet for different categories of income. (In the decennial Census of Housing, missing entries in some fields were filled in by a computerized editing program.)

If nonrespondents tend to have higher or lower incomes than respondents,

⁵ Appendix Table B-6 compares family and household incomes in 1960 by number of persons. The Censuses of Population and Housing, our sources for this comparison, are conducted jointly; the comparison is thus between different tabulations of the same data. The median incomes for households of two or more persons were all within 2.1 percent of the values for families of corresponding sizes; however, the median income for one-person households was 8 percent larger than the median for unrelated individuals.

the high rate of nonresponse in these surveys could seriously bias conclusions about the distribution of incomes based on those incomes that were reported. The likelihood of such biases, however, can be greatly reduced by matching nonrespondents to respondents on reported characteristics that are closely related to income. We divided nonrespondents into six groups according to tenure and type of housing and, within each group, into eight household sizes.⁶ Nonrespondents in each of these 48 categories were then allocated among income brackets in the pattern of respondents in the same category.

Table 6 shows the distribution of incomes by household size obtained from the Housing and Vacancy Survey of 1968, after allocation of nonrespondents. The

Table 6
PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY INCOME IN 1967 DOLLARS,
BY SIZE OF HOUSEHOLD: NEW YORK CITY, 1968

Income in 1967 Dollars ^a	Percentage Distribution, by Number of Persons per Household						Total
	1	2	3	4	5	6+	
Under 2,000	27.1	8.8	4.3	1.6	1.9	1.3	10.5
2,000-3,999	22.9	19.5	13.3	10.2	10.5	9.7	16.6
4,000-5,999	20.2	16.9	17.9	17.0	17.7	23.2	18.3
6,000-7,999	13.1	16.0	18.9	18.1	20.4	18.4	16.6
8,000-9,999	6.7	11.6	14.4	17.0	16.5	15.7	12.3
10,000-11,999	4.2	9.7	12.2	15.0	13.2	12.7	10.0
12,000-14,999	1.8	6.7	8.4	8.5	8.3	10.0	6.4
15,000 or more	3.9	10.6	10.4	12.6	11.5	8.8	9.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median income	\$4,000	\$ 6,600	\$ 7,100	\$ 8,350	\$ 7,950	\$ 7,650	\$ 6,530
Interquartile range	4,750	6,650	5,850	5,500	5,450	5,550	6,350
Upper limit	6,650	10,350	10,250	11,100	10,900	10,750	10,100
Lower limit	1,900	3,700	4,400	5,600	5,450	5,200	3,750

SOURCE: Appendix Table B-5.

NOTE: Distributions may not add exactly to totals because of rounding. Median and quartile incomes were estimated by graphic interpolation on cumulative frequency distributions within \$1,000 income intervals.

^a Reported income for calendar 1967 of the head of the household and related persons.

median income for one-person households is \$4,000, climbing to \$8,350 for four persons and dropping to \$7,650 for six or more persons. The most compact distribution is that for one-person households, with an interquartile range of \$4,750. The

⁶ Appendix Tables B-7 and B-8 show nonresponse rates for each category in 1965 and 1968, respectively. In both years, the highest rates of nonresponse were for households consisting of one or two persons, especially those living in cooperative or uncontrolled housing. The lowest rates of nonresponse were for tenants of public housing, who are required to file annual declarations of income with the New York City Housing Authority.

most dispersed distribution is that for two-person households, with an interquartile range of \$6,650. Larger households do not vary much in this respect, their interquartile ranges falling halfway between those of one- and two-person households. The median income for all households is \$6,530, with a fourth reporting incomes under \$3,750 (most of these are one-person households) and a fourth reporting incomes over \$10,100 (most of these are households of two or more persons).

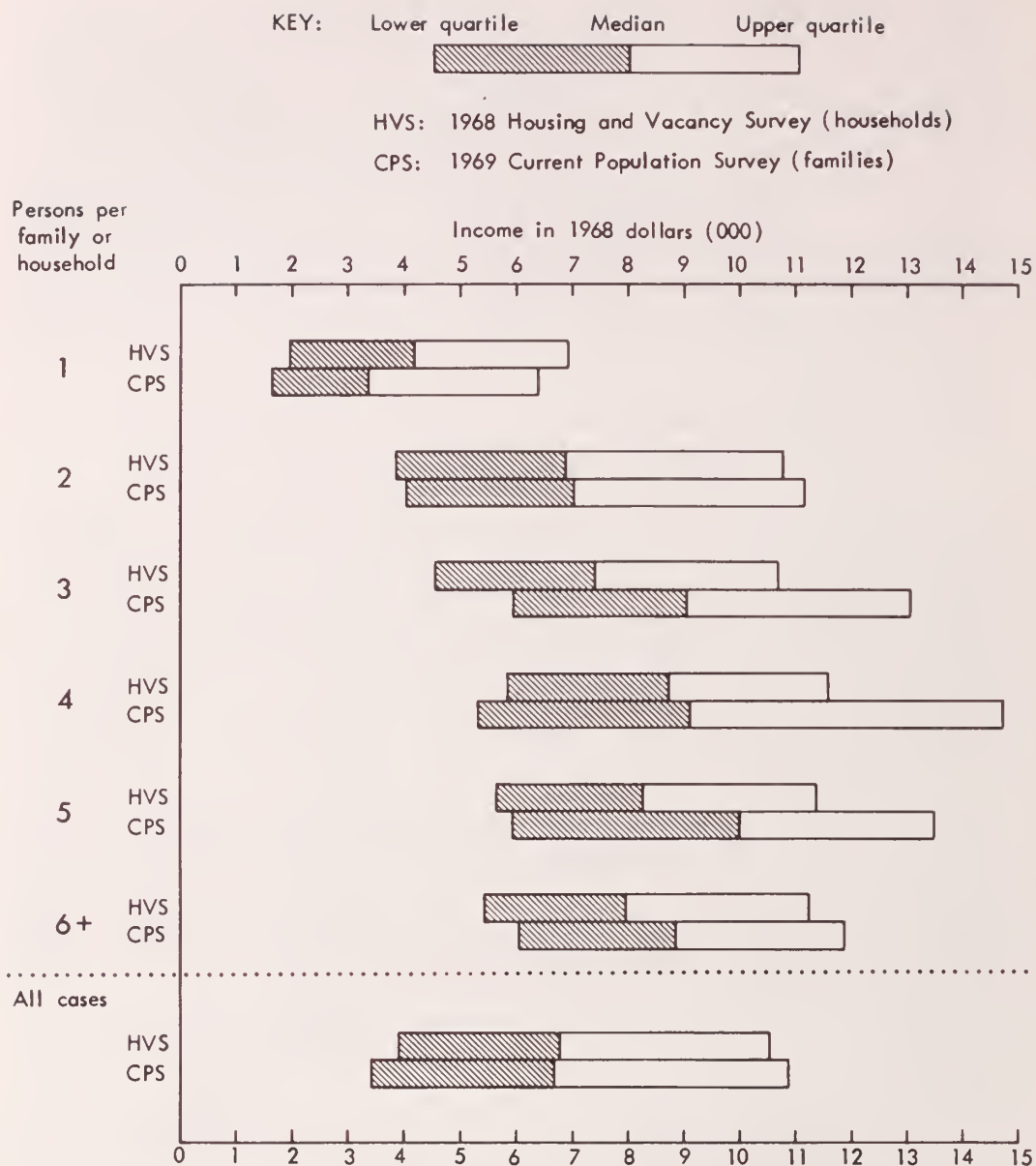
As noted above, there is not usually much difference between the incomes of families and households of corresponding size. It is therefore troubling to note that these data for households in 1968 differ markedly from those cited earlier for families in 1969. The two sets are compared in Fig. 6, after adjusting the earlier data for interim changes in purchasing power. On this basis, the median income reported by the Current Population Survey for unrelated individuals is nearly \$800 less than the median for one-person households. The medians for families are all larger than those for households of the same size, in two cases by more than \$1,600; the upper quartile values are also much higher, in one case by as much as \$3,000.

Obviously, only a small part of these differences can be attributed to changes in real income between 1968 and 1969. The rest must reflect either vagaries of sampling, nonresponse bias in the 1968 data, or differences in interview procedures. Except for one-person households and unrelated individuals, we are inclined to argue that most of the difference is attributable to the differences in interview procedures; these were much more thorough in the Current Population Survey, tending to elicit recollection of income from temporary employment of family members and from savings accounts, investments, etc., especially for families in the upper-income range.

For one-person households and unrelated individuals, we think that sampling procedures are partly to blame. The Current Population Survey found an unexpectedly large number of unrelated individuals, about 70,000 more than we would have anticipated from other data. Some features of their sample design suggest that it would be more effective in locating low-income individuals of irregular habits who are typically missed by field surveys. Table 7 compares the numbers of one-person households in 1968 and unrelated individuals in 1969 by income in 1968 dollars with corresponding figures for 1960. It shows a decrease of 53,000 one-person households with incomes under \$4,000, but an increase of 47,000 unrelated individuals in that income bracket.

The other factor, we think, is simply a continuation of the historic shift in living arrangements among the more prosperous unrelated individuals. This point is also illustrated by Table 7. Whereas the number of unrelated individuals with incomes over \$8,000 doubled, the number in separate households more than quadrupled. If both the 1968 count of one-person households and the 1969 count of unrelated individuals with incomes over \$4,000 are correct, about 80 percent of all unrelated individuals in this income bracket were living alone in housing units, as compared with 37 percent in 1960.

On the whole, we are inclined to credit the Current Population Survey with both better sampling and more complete reporting of incomes than is characteristic



SOURCE: Appendix Table B-6.

Fig. 6—Comparison of family and household incomes reported by different surveys: New York City, 1968 and 1969

either of the decennial census or the Housing and Vacancy Surveys. The difficulty with the CPS data is that they stand alone: they cannot be safely compared with data for earlier years from the other sources.

Table 7
CHANGES IN THE NUMBERS OF ONE-PERSON HOUSEHOLDS AND UNRELATED INDIVIDUALS,
BY INCOME IN 1968 DOLLARS: NEW YORK CITY, 1960-1969

Income in 1968 Dollars ^a	Thousands of One-Person Households		Ratio 1968/1960	Thousands of Unrelated Individuals		Ratio 1969/1960
	1960	1968		1960	1969	
Under 4,000	400.7	347.8	.86	504.9	552.2	1.09
4,000-7,999	91.2	222.9	2.44	238.5	257.3	1.08
8,000 or more	23.2	104.8	4.52	70.8	154.1	2.17
Total	515.1	675.3	1.31	814.1	963.7 ^b	1.18

SOURCES: Appendix Tables B-1, B-2, B-3, and B-5.

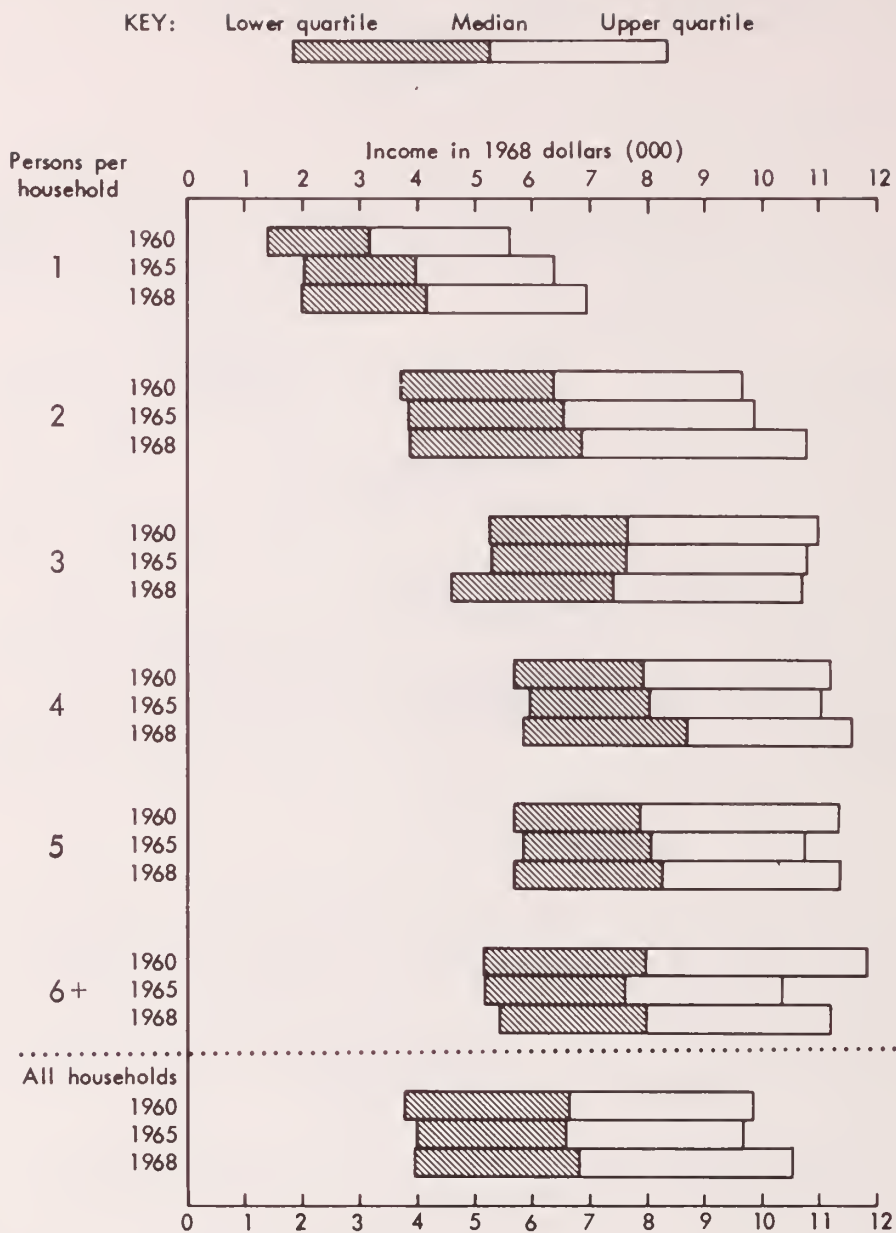
NOTE: Distributions may not add exactly to totals because of rounding. Incomes reported for calendar 1959 and 1967 were adjusted to 1968 dollars by graphic interpolation on cumulative frequency distributions within \$1,000 income intervals.

^a All incomes are reported for the calendar year preceding the survey.

^b Estimated by Blanche Bernstein, Center for New York City Affairs, to conform to the Bureau of the Census's estimate of the total population of New York City in mid-1968. See Appendix B.

We think that Fig. 7 provides a better perspective on income changes during the 1960s than does Fig. 5. It compares real incomes (expressed in 1968 dollars) of households by size of household as reported in the 1960 Census of Housing and the Housing and Vacancy Surveys of 1965 and 1968. For one-person households, we find an increase in median income of about \$1,000, or 32 percent, between 1960 and 1968. For all larger sizes of household, the increase is under 10 percent, averaging about 6 percent.

The latter finding is close enough to the 11-percent growth rate for family incomes obtained by comparing the 1969 CPS to the 1960 Census of Population that we need not be greatly concerned about the difference. By either measure, we can conclude that the rapid growth in the real incomes of families and multiperson households that was characteristic of the 1950s fell off to a very modest rate of growth in the 1960s. While our data on one-person households indicate growth in real incomes during the 1960s at about the same high rate as in the 1950s, we think that this is more the effect of a greater tendency for prosperous unrelated individuals to form separate households than a reflection of rising real incomes among unrelated individuals.



SOURCE: Appendix Table B-6.

Fig. 7—Trends in real incomes of households, by size of household: New York City, 1960-1968

PUBLIC ASSISTANCE AS A SOURCE OF INCOME

One of the remarkable events of our time has been the rapid growth in the population dependent on public assistance. New York City is no exception. In 1960, the Department of Social Services (DSS) reported an average monthly clientele of 324,000 persons, tripling to 1,011,000 in 1969 even though the City's population did not increase substantially during this period. Put another way, 13 percent of the City's residents were welfare clients in 1969 as compared with 4 percent in 1960.

For July 1969, DSS records showed 340,500 active cases, excluding those in institutions.⁷ About 40 percent of these were individuals aided because of age, blindness, or disability (including alcoholism and narcotics addiction). About 49 percent were cases of aid to dependent children in households lacking an adult male breadwinner. Most of the rest were cases in which a father was temporarily unemployed or earned too little to support his family. Public assistance was granted to these cases to cover their basic living expenses.

These grants totaled about \$780 million in calendar 1969, averaging \$770 per person assisted. The costs are divided among City, State, and Federal governments in proportions that varied with the type of case. Overall, the City contributes about 27 percent of the total, the State contributes about 33 percent, and the Federal government contributes the remaining 40 percent.

The DSS prepares a consumption budget for each case accepted for assistance. This budget includes the contract rent of the client's housing (pro-rated when the client shares quarters with unassisted persons) and standard allowances for utilities, food, clothing, etc., varying in amount with the size and composition of the assisted family. There are administrative ceilings on rent allowances for each family size (although these may be overridden if appropriate housing is not available at those rents), and special allowances are added to the basic budget to cover extraordinary expenses such as therapy for disabled persons or moving expenses when an assisted family relocates. The DSS grant is equal to this computed budget less any outside income reported by the client. About a third of all cases report some outside income, usually from pensions, Social Security, or unemployment compensation; it also seems likely under the circumstances that some outside income from sources not easily checked by the caseworker goes unreported. Reported outside income accounts for about 15 percent of the total income (including DSS grants) of welfare clients.

Because assistance is granted under a variety of categorical aid programs, a single household may include more than one welfare "case." Excluding inmates of institutions, the Bureau of the Budget estimates that 48,900 cases lived together in 22,700 multi-case households, and 291,600 cases lived in single-case households. Both groups must include some cases living in rooming houses or sharing housing units with unassisted persons, but these situations could not be distinguished. All

⁷ This figure was obtained from a tabulation by the Bureau of the Budget of payments made on July 2, 1969. It excludes about 6,000 welfare clients who receive payments while living in hospitals, nursing homes, and other institutions, and about 33,000 similar cases in which DSS payments were made directly to the institution. See Appendix B for details.

other cases form "households" as defined by the Bureau of the Census, with household size equal to the number of welfare clients listed in the case record.

Table 8 shows the distribution of these 314,400 welfare "households" by size and income. Nearly 114,000 consisted of one person; but, for the reasons indicated above, this is surely an overstatement in terms of the Census definition of a household. For welfare households of two or more persons, it seems safe to assume a high degree of equivalence with the Census definition. When these are compared with all multiperson households in 1968, we find that there are relatively few welfare households of two persons (26 percent v. 40 percent of all multiperson households) and relatively many welfare households of six or more persons (21 percent v. 8 percent). Households of three, four, and five persons have about the same relative frequency among welfare clients as among the population as a whole.

Table 8

NUMBER OF HOUSEHOLDS CONTAINING WELFARE CLIENTS BY INCOME IN 1969 DOLLARS,
BY SIZE OF HOUSEHOLD: NEW YORK CITY, 1969

Income in 1969 Dollars ^a	Thousands of Households, by Size of Household ^b						
	1	2	3	4	5	6+	Total
Under 1,000	8.1	0.2	0.1	0.1	0.1	0.1	8.8
1,000-1,999	90.2	11.3	4.4	0.2	0.3	0.6	107.1
2,000-2,999	14.2	37.3	26.6	4.6	0.3	0.7	83.7
3,000-3,999	0.4	1.1	12.3	27.2	9.7	2.3	53.1
4,000-4,999	0.2	0.7	1.3	2.4	12.7	12.8	30.1
5,000-5,999	0.3	0.7	0.8	0.8	1.1	13.3	17.1
6,000-6,999	0.2	0.2	0.4	0.5	0.5	6.7	8.5
7,000-7,999	0.1	0.1	0.1	0.2	0.3	3.2	4.0
8,000-8,999	(c)	(c)	(c)	0.1	0.1	1.2	1.3
9,000-9,999	—	—	(c)	(c)	(c)	0.5	0.5
10,000 or more	—	(c)	—	(c)	—	0.2	0.2
Total	113.7	51.6	46.2	36.1	25.2	41.6	314.4
Median income	\$1,647	\$2,233	\$2,832	\$3,468	\$4,110	\$5,319	\$2,431
Interquartile range	567	420	563	662	724	1,680	2,115
Upper limit	1,889	2,443	3,156	3,807	4,431	6,199	3,648
Lower limit	1,322	2,023	2,593	3,145	3,707	4,519	1,533

SOURCE: Tabulations prepared by the Bureau of Budget, City of New York, from records of the Department of Social Services (DSS).

NOTE: Distributions may not add exactly to totals because of rounding. Median and quartile incomes were estimated by linear interpolation within \$500 income intervals. Distributions exclude welfare clients under institutional care.

^a Includes public assistance grants from DSS and income from other sources reported by welfare clients. The amounts of other income are generally small, accounting for about 15 percent of the total reported income of welfare clients.

^b "Household size" is here defined as the number of assisted persons listed in DSS case records as residing at one address. Since welfare clients may live with unassisted persons or in group quarters, this definition is not always equivalent to the Census definition of a household; however, the incomes of unassisted persons are not counted in this tabulation.

^c Less than 50 households.

Within each size-group, incomes are tightly clustered. This is because the standard case allowances are based primarily on the number of persons assisted; typically, a single person was allowed about \$1,650 and each additional person was allowed roughly \$600. Overall, the median income of welfare households was \$2,431, a figure which may be compared with \$6,530 for all households in 1968, or \$6,070 for all unrelated individuals and families in 1969.

Unfortunately, these data on the incomes of welfare clients cannot be matched precisely to corresponding data for all residents of all New York City, not an uncommon occurrence when data are gathered and tabulated by entirely different procedures.⁸ Broad comparisons with income data from the 1968 Housing and Vacancy Survey are nonetheless in order; they are made in Table 9. First, we may note that the proportion of all low-income households who are welfare clients varies a good deal with household size. Welfare clients account for about half of all one-person households but only a fourth of all two-person households in the lowest quartiles of income for these household sizes. The proportion rises thereafter with household size, to 45 percent for households of six or more persons. Except for one-person low-income households, those sizes with the smallest proportions of welfare clients are also the sizes accounting for the largest numbers of households. Thus, two-thirds of the self-supporting low-income households consist of two, three, or four persons.⁹

Second, while most of those with incomes in the lowest quartiles for their household sizes are not welfare clients, nearly all welfare clients—82 percent—reported incomes in this range. Thus expansion of the City's welfare program during the 1960s seems to have altered the City's income distribution only within the lowest quartile, leaving the median undisturbed. This conclusion must be tempered, however, by the possibility that the availability of welfare benefits has attracted to New York City indigents who otherwise would have lived elsewhere. To the extent that this has occurred, the welfare program could be credited with increasing the number of low-income households, thus causing the median income to shift downward.

This last *possibility* has often been presented as a *fact*, but there is really no very good way to ascertain from existing data the extent to which New York City's relatively generous schedule of welfare benefits has attracted poor immigrants who would not otherwise have come. The most nearly pertinent data that we know, presented in Table 10, are suggestive but inconclusive. The table shows the relation-

⁸ Although income definitions are the same, neither the welfare "case" nor the welfare "household" corresponds exactly to the units of population accounting employed in the Bureau of the Census's income tabulations. The tabulation of welfare records is for 1 July 1969, about 3 months later than the March 1969 Current Population Survey and about 14 months after the 1968 Housing and Vacancy Survey. (About 65,500 cases were added to the welfare rolls between May 1968 and July 1969.) In any event, subtracting the entries in Table 8 from those of similar tables for all households in 1968 (Appendix Table B-5) or for unrelated individuals and families in 1969 (Table 4 and Appendix B) leaves some suspiciously depleted cells and even a few negative entries. The most likely explanation is that the incomes of welfare clients, as reported to the Bureau of the Census's field workers, are less tightly clustered than they are in the official records of the Department of Social Services.

⁹ Here, we are using the term "low-income" to describe households in the lowest quartile of the income distribution for their particular household size. Nothing is implied about the adequacy of these incomes for any particular standard of living.

Table 9

COMPARISON OF INCOMES OF WELFARE HOUSEHOLDS AND ALL LOW-INCOME HOUSEHOLDS,
BY SIZE OF HOUSEHOLD: NEW YORK CITY, 1968/1969

Item	Number of Persons per Household						
	1	2	3	4	5	6+	Total
Incomes of all households in 1968: lower quartile value ^a	\$1,900	\$3,700	\$4,400	\$5,600	\$5,450	\$5,200	\$3,750
Thousands of households in 1968 with less income	168.8	211.0	117.5	98.3	53.2	43.1	691.9
Thousands of welfare households in 1969 with less income ^b	85.3	49.6	43.9	35.0	23.6	19.2	256.6 ^c
<i>As percent of all households with less income</i>	<i>51</i>	<i>24</i>	<i>37</i>	<i>37</i>	<i>44</i>	<i>45</i>	<i>37</i>
<i>As percent of all welfare households</i>	<i>75</i>	<i>96</i>	<i>95</i>	<i>97</i>	<i>94</i>	<i>46</i>	<i>82</i>

SOURCES: Table 8 and Appendix Table B-5.

NOTE: "Household" concepts are not strictly comparable, and data were gathered 14 months apart by different procedures. See text for discussion.

^a Incomes reported for calendar 1967, in 1967 dollars.

^b Incomes estimated for 1969 from Department of So-

cial Services allowances for the first half of July 1969. Number of households estimated from Table 8 by linear interpolation with \$1,000 income intervals.

^c Sum of row entries; incomes below \$3,750 were reported for 239,400 welfare households.

ship between recency of arrival and dependence on public assistance, including unemployment compensation, for persons living in the New York-Northeastern New Jersey Standard Consolidated Area (SCA) in 1967.¹⁰

The table covers only persons 14 years and older, so that none of those born in the SCA could be children of post-1956 immigrants. It shows separate figures for whites and Negroes, but the figures for whites are ambiguous because they include most Puerto Ricans. The latter account for only a small share of white persons born here, but a large share of recent white immigrants and an even larger share of whites on welfare. Thus, the small percentage of white immigrants who were on welfare in 1966 probably reflects simply a smaller-than-usual influx of Puerto Ricans in that year.

In any event, the incidence of welfare dependency among Negroes, whether they were born in this area or moved here, is clearly higher than among whites. The figures for Negro immigrants show a pattern that would probably apply to Puerto Ricans as well. Among Negroes migrating to the area, the most recent arrivals were also those most likely to be on welfare. Nearly 26 percent of those arriving in 1966, but only 11 percent of those arriving before 1956, received public assistance in 1966.

¹⁰ The peculiarities of coverage and grouping in Table 10 are due in part to features of the survey records on which it is based, and in part to the special interests of our NYCRI colleague, Irving Fisher, who abstracted those records. Since the data thus compiled would still illustrate our point, we did not retabulate the basic records, a rather complicated process.

These data are for the Standard Consolidated Area (SCA); New York City accounts for about half the total population of the SCA.

Table 10

MIGRATION HISTORIES OF WHITE AND NEGRO RESIDENTS 14 YEARS AND OLDER,
BY WELFARE STATUS: NEW YORK-NORTHEASTERN NEW JERSEY
STANDARD CONSOLIDATED AREA, 1967

Persons 14 Years and Older Who Were Residents in 1967, by Ethnic Group	Born in SCA	Migrants to SCA, by Year of Move					Total
		Before 1956	1956- 1960	1961- 1965	1966	Year Not Reported	
<i>White</i> ^a							
Thousands of residents	6,235.5	2,594.6	560.2	962.0	160.9	103.5	10,616.7
Thousands of welfare clients ^b	491.4	221.6	61.6	125.4	12.0	8.0	920.0
Percent of residents on welfare	7.9	8.5	11.0	13.0	7.5	7.7	8.7
<i>Negro</i>							
Thousands of residents	570.1	432.6	140.2	133.7	20.9	19.0	1,316.5
Thousands of welfare clients ^b	121.4	49.4	24.6	29.9	5.4	2.3	233.0
Percent of residents on welfare	21.3	11.4	17.5	22.4	25.8	12.1	17.7
<i>Total</i>							
Thousands of residents	6,805.7	3,027.2	700.4	1,095.7	181.8	122.5	11,933.3
Thousands of welfare clients ^b	612.9	271.0	86.2	155.3	17.4	10.3	1,153.1
Percent of residents on welfare	9.0	9.0	12.3	14.2	9.6	8.4	9.7

SOURCE: Tabulations by NYCRI of records of the national Survey of Economic Opportunity conducted by the U.S. Bureau of the Census in 1967 (2,300 interviews in the Standard Consolidated Area).

NOTE: The Standard Consolidated Area includes New York City; Nassau, Rockland, Suffolk, and Westchester Counties in New York State; and Essex, Morris, Union, Hudson, Bergen, Passaic, Middlesex, and Somerset Counties in New Jersey. This tabulation excludes 3,984,000 per-

sons under 14 years of age and about 200,000 nonwhites of other than Negro stock who were residents of the SCA in 1967. Distributions may not add exactly to totals because of rounding.

^a Includes white Puerto Ricans.

^b Persons in families reporting income from public assistance payments or unemployment compensation in 1966.

Our source does not provide us with the welfare histories of those immigrants who were not on welfare in 1966, nor does it account for former welfare clients who had moved away by 1967, the year of the survey. This information would be required to confirm the most plausible interpretation of these data: that although a significant fraction of all immigrants to this area become public charges on arrival, about half of them leave the welfare rolls within a decade.

It is worth noting that Negroes born in the area have a higher rate of welfare dependency than any but quite recent Negro migrants. Since persons under 14 years of age were excluded from the tabulation, welfare dependents born here can only rarely be children of recent immigrants. They may, however, be elderly persons, a class that is usually underrepresented among migrants. Such a difference in age distribution among the adult native-born and the less-recent adult migrants may explain the difference in welfare dependency among the two groups.

Table 9, discussed above, shows that welfare households account for about 37 percent of all low-income households, the latter defined as those in the lowest quartiles of the income distributions for their respective household sizes. While this

figure enlightens us as to the composition of the low-income population, another treatment of the same data is more responsive to a question of direct concern to City officials in view of the rising welfare caseload and the spreading view of public assistance as a right of low-income families rather than a last resort for the destitute: How many residents of New York City not now receiving public assistance are eligible and may choose to enroll in the future?

Under the present system of categorical aid, low income is only one of the criteria of eligibility for public assistance; the applicant must also show an acceptable reason for his inability to support himself. Most common is the absence of an able-bodied father in a household consisting of an adult female and her minor children. The list of acceptable reasons, however, is quite broad, including old age, youth, physical or mental disability, alcoholism or drug addiction, inability to find employment, or inability to support dependents because of low earning power.

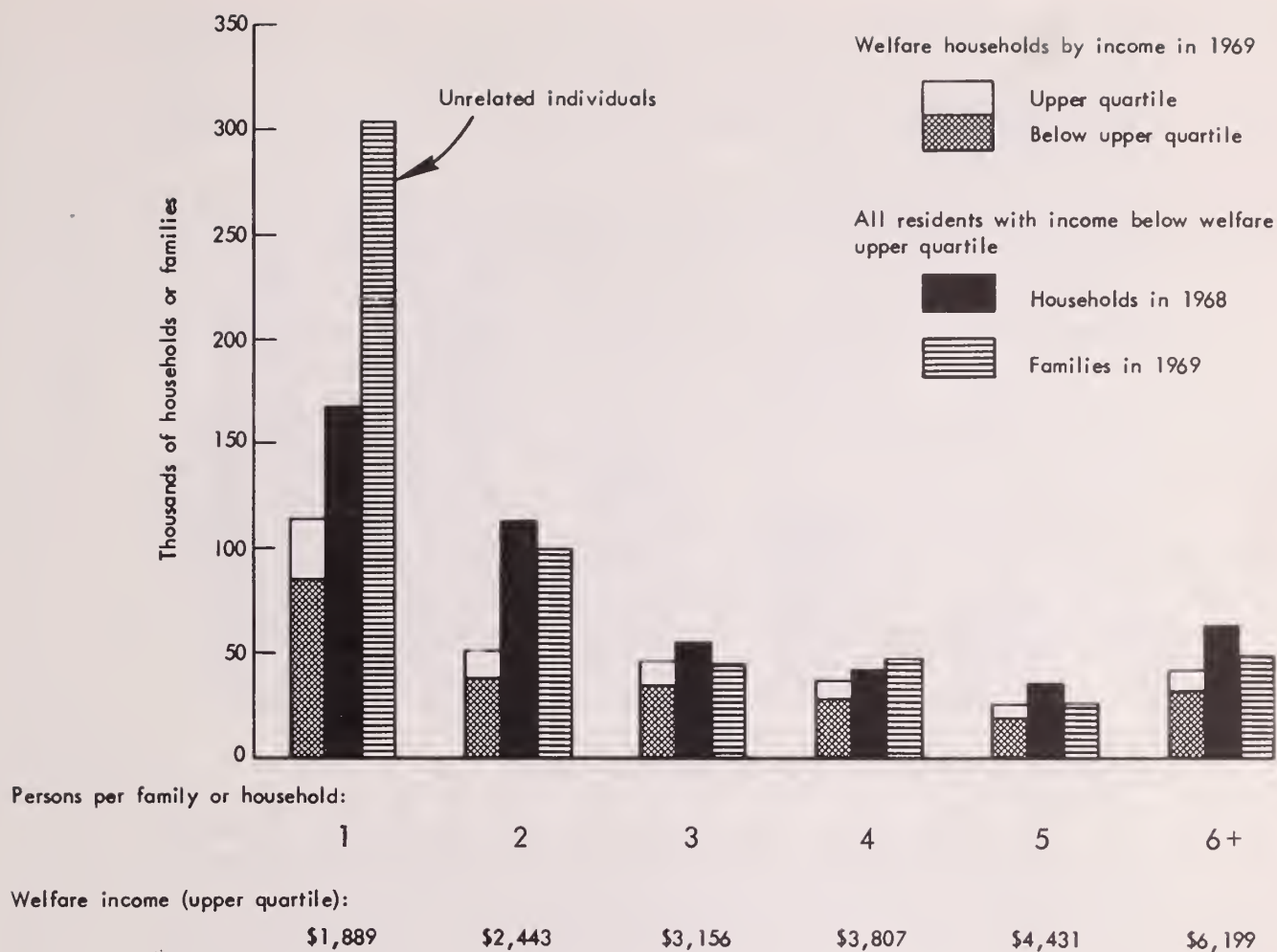
In Fig. 8, we apply an approximate means test to New York City's households as of 1968 and its families as of 1969. One reason for showing both household and family income distributions is that neither unit of population accounting is strictly comparable to our welfare "household" concept; another is that, as we have already seen, the surveys that generated income data for households and for families yielded significantly different results.

The first bar of each group in Fig. 8 shows the number of welfare households by size of household; the shaded portion of the bar represents the number with incomes in 1969 below the upper quartile value of the income distribution of welfare households of that size—i.e., all but the top 25 percent. These upper quartile values, ranging from \$1,889 to \$6,199, depending on household size, are the incomes that we will use as our standard of welfare eligibility, assuming that households or families with higher incomes would be unlikely to qualify for public assistance.

The second bar of each group represents the number of households in 1968 whose 1967 incomes as reported in the Housing and Vacancy Survey were below the welfare standard for that household size. In every case, there appear by this standard to be many more households whose incomes were low enough to qualify them for public assistance than the number actually enrolled (as represented by the shaded portion of the first bar of that group). Altogether, we estimate by this calculation that there were 474,000 "eligible" households in 1968, of which 238,000 were not enrolled. Of the latter group, two-thirds were households of one or two persons, most of whom must have been elderly persons subsisting on Social Security or pensions.¹¹

As of 1 July 1969, our records show 314,400 welfare households. It would appear, therefore, that the existing supply of welfare eligibles might permit an

¹¹ Actually, the number of eligibles not enrolled in 1968 must have been somewhat larger than these figures indicate, inasmuch as some 65,500 cases were added to the rolls in the 14 months between the date of our 1968 income distribution for all households and the date of our 1969 count of the welfare population. There is no reason to suppose that the new enrollees were mostly immigrants rather than 1968 residents. For the years 1961 through 1966, immigrants annually added about 29,000 persons 14 or more years of age to the welfare population of the entire Standard Consolidated Area, whose total population is about twice that of New York City (see Table 10). Under reasonable assumptions, this would work out to about 5,000 immigrant "cases" for New York City in 14 months.



SOURCES: Appendix Tables B-9 and B-10.

Fig. 8—Households and families with incomes below welfare standards:
New York City, 1968/1969

expansion of as much as 50 percent in the welfare rolls if all eligibles applied. Program costs, however, would not increase commensurately, for two reasons: (a) the outside incomes of the presently unassisted eligibles would be deducted from standard allowances, and many of these incomes are close to the standard; and (b) the apparently eligible but unenrolled households are predominantly small ones, requiring less assistance than the average enrolled household.

The third bar in each group represents the number of unrelated individuals or families in 1969 whose 1968 incomes as reported in the Current Population

Survey were below the appropriate welfare standard. The reader may recall that this survey reported generally higher incomes for families than the 1968 Housing and Vacancy Survey reported for households, but lower incomes for unrelated individuals than the latter survey showed for that subset of unrelated individuals who formed one-person households.

We find about 304,000 unrelated individuals and 262,000 families with incomes below the upper quartile of welfare allowances for the relevant size of family. Subtracting welfare households from this population leaves 218,000 unrelated individuals and 112,000 families who appear to meet the welfare means test but who were not enrolled: enough to permit an 80-percent increase in the welfare caseload, with two-thirds of that increase consisting of unrelated individuals.

We have no way of telling how many of those households or families who meet the welfare means test but who were not enrolled in mid-1969 are likely to enroll in the future, but neither set of data lends any support to the notion that welfare enrollment is now close to its theoretical maximum. What *is* clear is that, under present welfare standards, the greatest potential increase in enrollment is among unrelated individuals and couples, a finding that probably reflects more than anything else the fact that the City's welfare standards have surpassed the Social Security benefits and pensions on which many of the elderly now subsist.

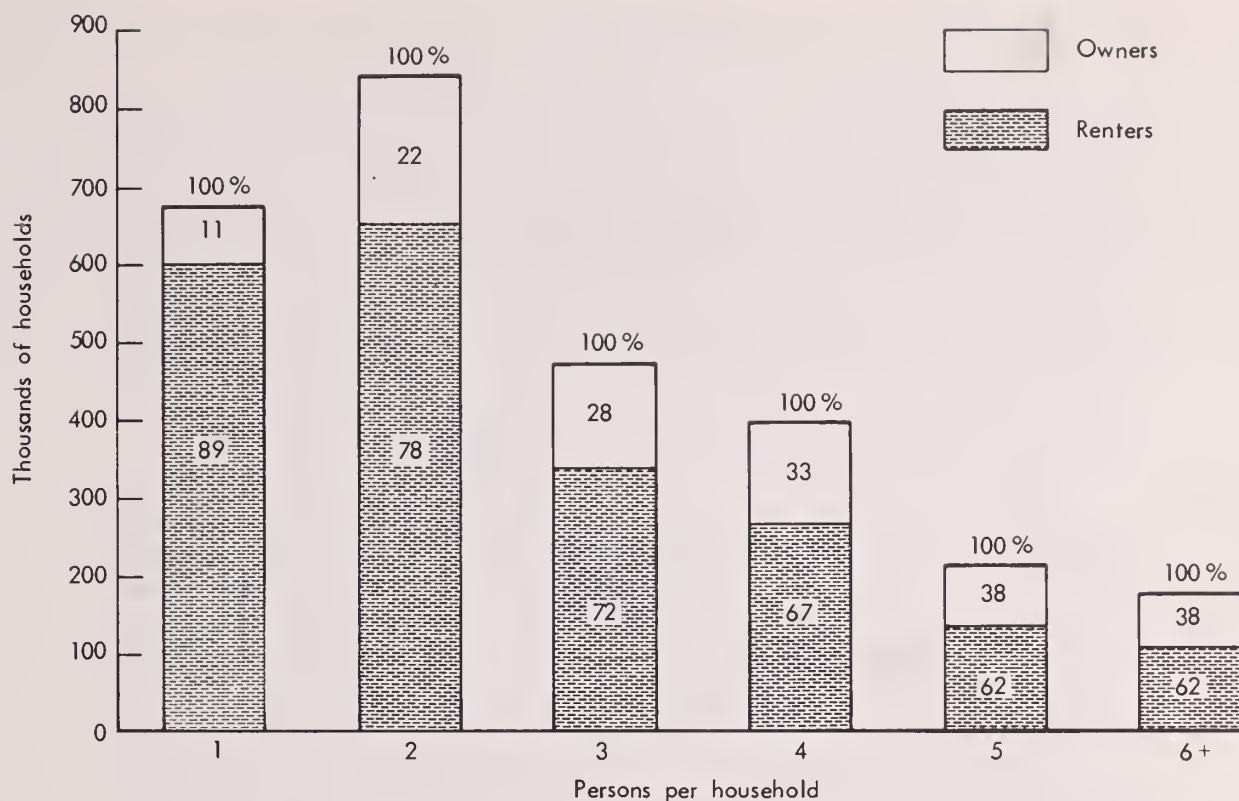
INCOMES OF HOMEOWNERS AND RENTERS

So far in this chapter we have reviewed trends and patterns in the distribution of incomes for all New York City's residents by size of family and size of household, and of low-income residents by welfare status. These trends and patterns provide the necessary background for our main interest, an examination of the financial resources and housing expenditures of those who live in rental housing. This topic will be pursued in Ch. IV; here, at least, we should distinguish renters as a group and show how their incomes differ from those of people who own their homes.

In 1968, about 76 percent of the City's 2.8 million households occupied rental quarters: a slightly lower proportion than in 1960, but still among the highest in this respect of the nation's central cities.¹² Figure 9 shows the distribution of New York City's households by tenure and size of household in 1968. We should note that the category of "owners" includes not only owner-occupants of single-family houses and duplexes (514,000) but owner-occupants of apartments in larger structures containing mostly rental units (65,000), and tenants of cooperatively owned apartment

¹² In 1960, the percentages of renters among all households in eight large central cities were as follows:

New York City.....	78%	Los Angeles.....	54%
Boston.....	73%	Pittsburgh.....	51%
Chicago.....	66%	Detroit.....	42%
San Francisco.....	65%	Philadelphia.....	38%



SOURCE: Appendix Table B-11.

Fig. 9—Distribution of households by tenure and size of household:
New York City, 1968

houses and condominiums (92,000).¹³ "Renters" include all those occupying housing in which they had no equity, even if they did not pay cash rent. About 39,000 out of 2.1 million renter households reported that they paid no cash rent. These were mostly janitors or building superintendents, whose reported incomes, incidentally, do not include the rental value of the apartments they occupy and are therefore substantially understated.

Not surprisingly, the incidence of rental tenure is highest for persons living alone; indeed, it decreases fairly regularly with size of household up to five or more persons. In Ch. II, we called the reader's attention to the large and growing proportion of small households in New York City, a trend even more pronounced among

¹³ Collateral evidence indicates that some tenants of cooperatives or condominiums must have reported themselves as renters. For those who live in certain middle-income cooperatives subsidized by the City and State governments (about 45,000 units) that response was not inappropriate since tenant equities were nominal.

renters. About 60 percent of the renter households shown in Fig. 9 consist of either one or two persons and only 11 percent contain as many as five persons.

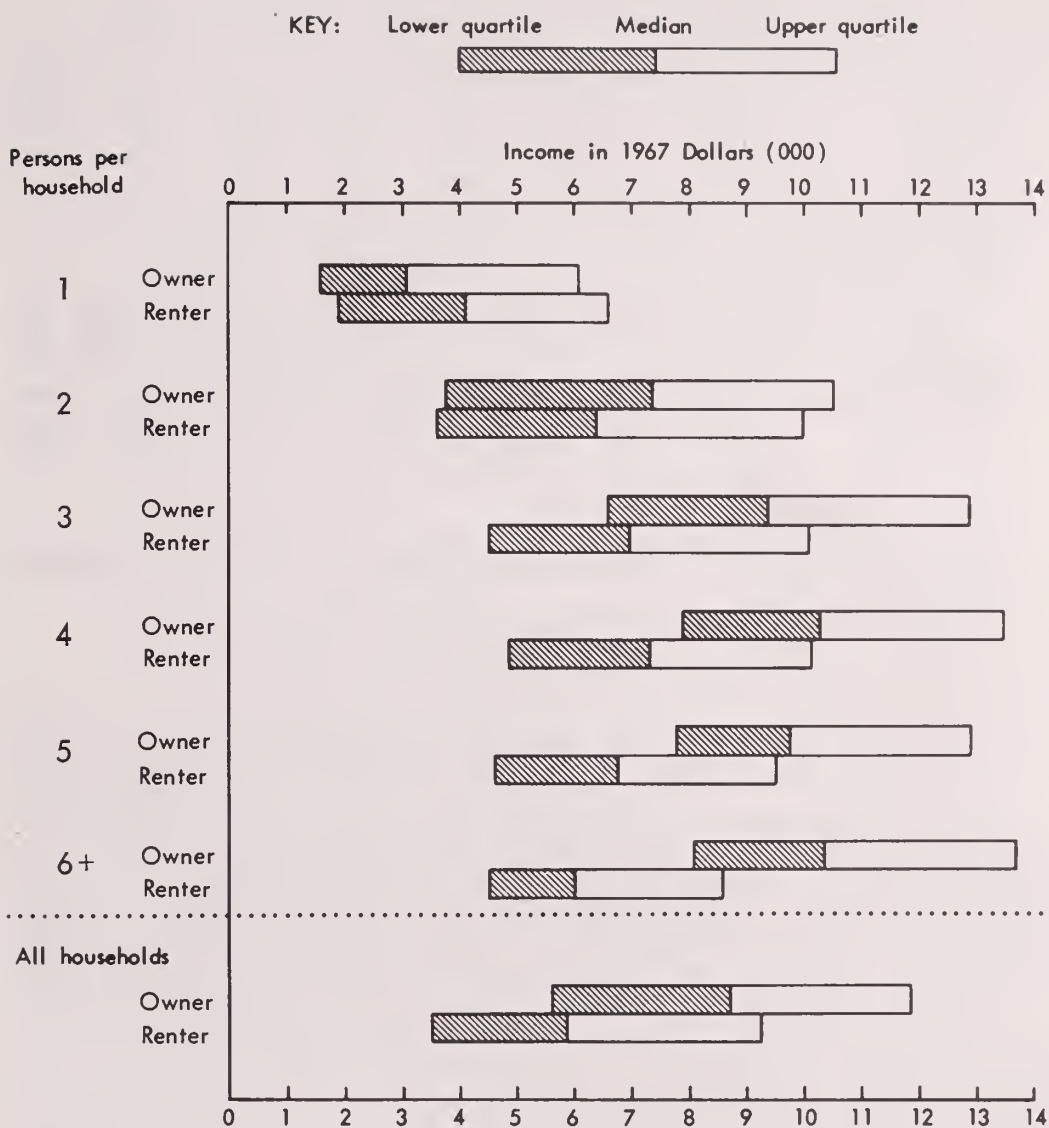
The incomes of homeowners and renters in 1968 are compared in Fig. 10. Relatively few homeowners (about 74,000) live alone, and their cash incomes tend to be quite low, with a median value of \$3,080. There are eight times as many renters as owners living alone, and the renters are nominally more prosperous, with a median income of \$4,100. However, a fair comparison of the incomes of homeowners and renters should take account of the income-in-kind (housing services) received by the homeowner as a return on his equity. For households of larger size, the homeowners are not so small a minority and they are distinctly more prosperous than the renters even in terms of cash income; the difference in median incomes increases with household size to the extent that, for households of six or more persons, the interquartile ranges hardly overlap.

Renter incomes follow an interesting pattern that can be followed in Fig. 10, or in more detail in Table 11. The median value rises sharply with household size to a peak of \$7,300 for four persons, then declines sharply to \$6,000 for six persons or more. The distribution around the median is most widely dispersed for two-person households, a fourth of which reported incomes under \$3,600 and a fourth over \$9,960. As household size increases, the interquartile range narrows; among renter households of six or more persons, the corresponding quartile limits are \$4,500 and \$8,550.

The reason why the median income rises with household size up to four persons while the interquartile range contracts is principally that the incidence of households without earners decreases with household size. Among the smaller sizes—and especially among two-person households—both earners and nonearners are well represented, with a typically wide gap between the incomes of households dependent on transfer payments and those with one or two full-time earners. Among the households of larger size, where the incidence of those without earners is low, variations in household income reflect primarily differences in the skills of the employed head of the household and the employment status of other household members. As we saw in Ch. II, Negroes and Puerto Ricans are disproportionately represented among the largest household sizes, and their relatively low earning power, accentuated by the high incidence of female-headed households, is reflected in the lower median incomes of these large households. Probably also the incidence of working wives diminishes as the number of children increases.

Of the City's 2.1 million renter households, some 240,000 reported incomes below \$2,000 in 1967; about half of these were welfare clients, and 89 percent consisted of either one or two persons.¹⁴ In Ch. VI, we review standard budgets for low-income households of various sizes and compositions, but we can anticipate by noting that even for single persons without work-related expenses or income tax liabilities, about \$2,200 was required in 1967 to maintain a "low-to-moderate" standard of living. These are truly the City's poor.

¹⁴ In this and succeeding paragraphs, our figures for the numbers of renter households in each income bracket are taken from Appendix Table B-13, rather than from Table 11 which shows only percentage distributions.



SOURCES: Appendix Tables B-12 and B-13.

Fig. 10—Comparison of incomes of homeowners and renters, by size of household: New York City, 1968

Table 11

PERCENTAGE DISTRIBUTION OF RENTER HOUSEHOLDS BY INCOME IN 1967 DOLLARS,
BY SIZE OF HOUSEHOLD: NEW YORK CITY, 1968

Income in 1967 Dollars ^a	Percentage Distribution, by Number of Persons per Household						
	1	2	3	4	5	6+	Total
Under 2,000	26.2	8.6	4.7	1.9	2.3	2.0	11.4
2,000-3,999	22.7	20.1	15.7	14.5	15.3	14.6	18.9
4,000-5,999	20.8	17.8	20.8	21.9	24.0	33.1	20.8
6,000-7,999	13.5	16.2	19.3	19.0	22.2	20.4	16.9
8,000-9,999	6.9	11.0	14.0	15.5	14.1	13.5	11.2
10,000-11,999	4.3	9.1	10.4	11.3	9.8	8.5	8.2
12,000-14,999	1.8	6.9	7.5	6.4	5.2	5.4	5.3
15,000 or more	3.8	10.1	7.6	9.5	7.1	2.5	7.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median income	\$4,100	\$6,380	\$ 6,950	\$ 7,300	\$6,730	\$6,000	\$5,880
Interquartile range	4,680	6,360	5,570	5,250	4,900	4,050	5,720
Upper limit	6,580	9,960	10,070	10,100	9,500	8,550	9,220
Lower limit	1,900	3,600	4,500	4,850	4,600	4,500	3,500

SOURCE: Appendix Table B-13.

NOTE: Distributions may not add exactly to totals because of rounding. Median and quartile incomes were estimated by graphic interpolation on cumulative frequency distributions within \$1,000 income intervals.

^a Reported income for calendar 1967 of the head of the household and related persons.

Another 395,000 households reported incomes between \$2,000 and \$4,000; one- and two-person households again predominate (68 percent), but nearly a third are larger families who are even worse off than a single person with \$2,000. The minimum full-time wage in New York City in 1967 was about \$3,200, although only a few job categories paid that little (e.g., janitors, watchmen, shipping clerks, filing clerks, office boys). We must conclude that most of these 395,000 households were either without earners or underemployed; indeed, about a third were welfare clients.

Nearly 440,000 renter households reported incomes between \$4,000 and \$6,000, about equally divided between households of one or two persons and households of three or more. Only about 10 percent of these were welfare recipients, and those were nearly all households of five or more persons. For a retired couple, \$4,000 would have supported a "low-to-moderate" level of living with a bit to spare. For three persons, one of whom was employed, \$6,000 was barely adequate for that level of living after income taxes and work-related expenses.

Nearly 590,000 renter households reported incomes between \$6,000 and \$10,000. These households were virtually all self-supporting, and about half consisted of one or two persons. However, only 11 percent of all one-person households fell in this bracket, in contrast to 20 percent or more of all larger households. Small households with these incomes must be considered prosperous by most standards; large ones could live moderately well on \$9,000 to \$10,000.

About 280,000 renter households reported incomes between \$10,000 and \$15,000. As noted earlier, large households and single persons are scarce in the upper income brackets. Some 37 percent of all households with incomes in this range consisted of two persons and 38 percent consisted of three or four persons.

Finally, there were about 150,000 renter households with incomes above \$15,000, of which 44 percent consisted of two persons and 33 percent of three or four persons. The extremely high incidence of two-person households in this group suggests that many of these high-income households consisted of childless couples, both employed.

In appraising this income distribution for renter households, it is well to remember that the incomes reported in our source—the 1968 Housing and Vacancy Survey—are generally understated and particularly so in the upper ranges. While the City's renters are not nearly so prosperous as its owners, they are undoubtedly better off as a group than Table 11 indicates. However, these are the only recent data available that distinguish between renters and owners and that can be related to other household characteristics. We shall therefore use them as the basis for subsequent analysis.

RENTER HOUSEHOLDS: LEVELS OF LIVING

The reader probably found our discussion of renter incomes in the preceding section rather hard to follow. We certainly found it hard to write, mostly because we felt compelled to distinguish among households of various sizes throughout our account of the income distributions. We felt this necessity because our interest in renter incomes depends on their usefulness as indicators of the budgetary problems of these households.

Clearly, a given dollar income will not support all families of whatever description in equal comfort. Differences in taste aside, more goods are required to provide a given level of consumption to members of a large family than to members of a small family. Other differences in family structure (e.g., age/sex composition, number of employed persons) also are pertinent to a level-of-living interpretation of household incomes, but their net effects are more difficult to take into account.

To clarify the economic circumstances of the City's households, we devised a method for adjusting reported incomes for differences in size of household to yield a level-of-living index that we call "reference income." We selected a four-person family as a convenient standard case, and designated its income (Y_r) as the "reference income." For a household of n members, the dollar income providing the same level of living (Y_n) can then be expressed as a function of the additional, or marginal, cost (MC) of an additional family member, as follows:

$$Y_n = Y_r + (n - 4)MC. \quad (1)$$

To determine the marginal cost of an additional family member, we consulted several budget studies, each covering families of several different sizes and each

dealing with a different range of incomes.¹⁵ Regression analysis of these data led us to the conclusion that for New York City the following marginal cost function was reasonably accurate when incomes were expressed in dollars of 1968 purchasing power:

$$MC = \$120 + 0.128 Y_r \quad (2)$$

In other words, the cost of supporting an extra household member amounts to about \$120 plus 13 percent of the basic level of living as measured by the income of a four-person household. This result simply reflects the propensity of households to share their resources, whatever these may be, among all members.

For any given reference income, Eqs. (1) and (2) enable us to calculate the income needed by a household of specified size to achieve approximately the same level of living as a household of four persons. Thus, incomes of \$4,990 for two persons, \$6,000 for four persons, and \$7,010 for six persons would all support about the same level of living.

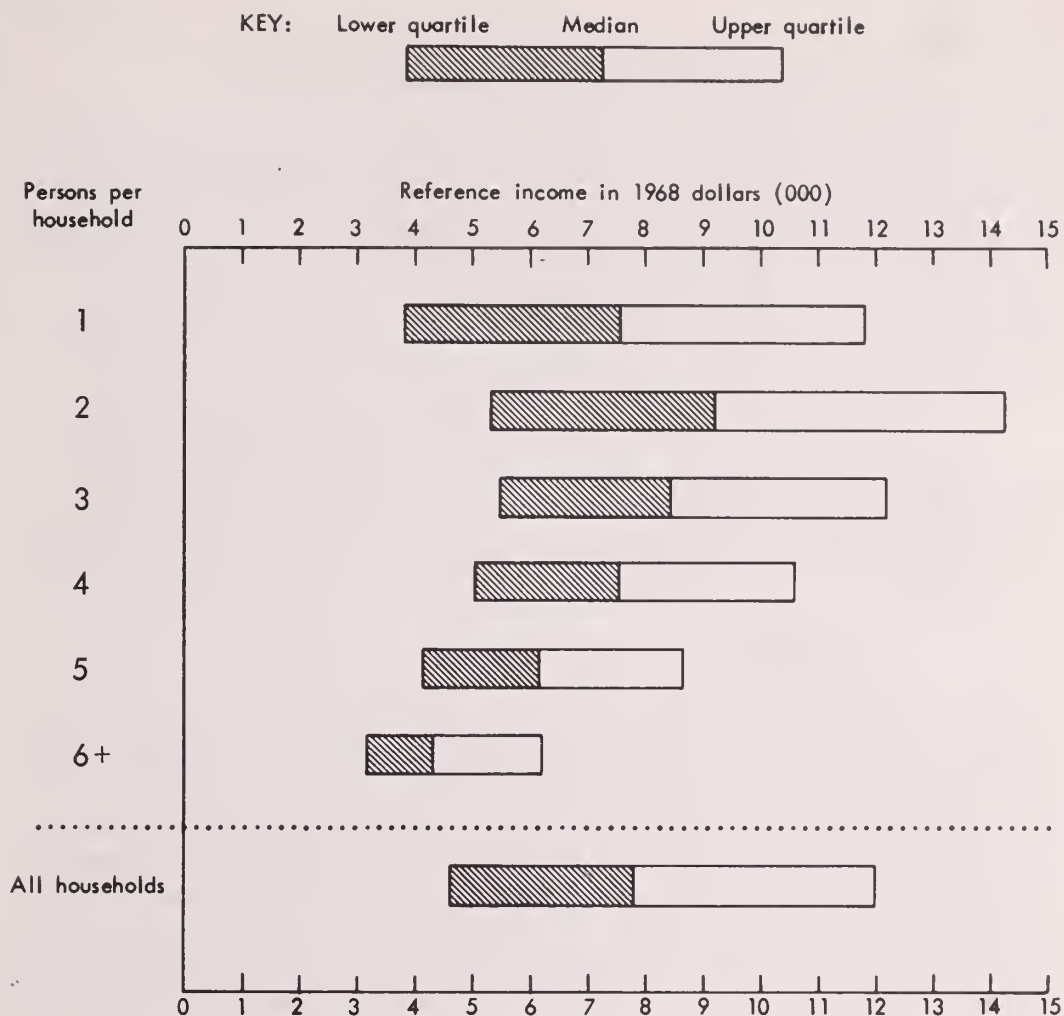
We have applied these equivalence relationships to the detailed income distributions for renter households shown in Appendix Table B-13. The results are shown in Fig. 11. As shown at the bottom of the figure, the median reference income for all renter households in 1968 was \$7,800, which means that half were able to live better than a family of four with that dollar income, and half were not able to live as well. A fourth of all renters had reference incomes below \$4,600 and another fourth exceeded \$12,000.

Earlier, we saw that the reported incomes of renter households increased with household size, the median value reaching its maximum at four persons, then declining for larger sizes. (See Fig. 10.) Adjusting these reported incomes to level-of-living equivalents changes that picture. In the reference income distribution, two-person renter households emerge as the most prosperous size, with a median reference income of \$9,250; a fourth had reference incomes in excess of \$14,300. Each larger size of household had a lower median and a narrower interquartile range than its predecessor; for six or more persons, the median value of \$4,300 was less than half the median value for two persons, and the interquartile range was only a third as wide.

One-person households, whose reported incomes tended to be quite low relative to those of larger households, did not fare badly when their limited budgetary responsibilities were taken into account. Their median reference income was about

¹⁵ Our method was developed and calibrated by Robert Jones, City University of New York, a consultant to NYCRI. Sources of budget data included budgets prepared by the U.S. Office of Economic Opportunity to demarcate a national nonfarm "poverty" level (\$3,130 for a male-headed household of four) and a "near-poverty" level (\$4,075 for the same household); a budget prepared by the Community Council of Greater New York "required to maintain an adequate level of living at low-to-moderate cost" (\$6,600); and a budget prepared by the U.S. Bureau of Labor Statistics which was designed to allow a city worker to attain a "moderate" standard of living (\$8,030).

These budgets were based on prices and consumption patterns for various places and various years between 1964 and 1967. We adjusted them all to 1968 price levels in New York City and made allowances for tax liabilities then peculiar to New York City. For budgets that specified age/sex composition as well as household size, we tried to choose consistently with respect to composition for households of a given size.



SOURCE: Appendix Table B-14.

Fig. 11—Comparison of levels of living of renter households,
by size of household: New York City, 1968

\$7,600, nearly matching that of four-person households (who reported the highest dollar incomes of any household size). However, one-person households were widely dispersed along the reference income scale, a fourth falling below \$3,850 and a fourth above \$11,850.

Table 12 shows the number of renter households of each size at the extremes of the reference income distribution for all households combined. Because one- and two-person households are so numerous relative to the larger sizes, they account for most of the households with very low or very high reference incomes: nearly 60

Table 12
NUMBERS OF RENTER HOUSEHOLDS BY REFERENCE INCOME IN 1968 DOLLARS,
BY SIZE OF HOUSEHOLD: NEW YORK CITY, 1968

Reference Income in 1968 Dollars ^a	Thousands of Households, by Number of Persons per Household						
	1	2	3	4	5	6+	Total
Under 4,600	182.6	128.7	60.7	53.5	41.3	58.1	524.9
4,600-11,999	273.1	300.5	190.1	164.9	76.8	45.3	1,050.7
12,000 or more	145.3	227.0	88.3	43.7	13.4	3.2	520.9
Total	600.9	656.2	339.1	262.1	131.5	106.6	2,096.5

SOURCE: Computed from data in Appendix Table B-13.

NOTE: Income intervals shown in stub represent the lowest quartile, interquartile range, and highest quartile of the reference income distribution for all household sizes combined. Because the quartile values were rounded after computation, the distribution of the "total" column deviates slightly from 25-50-25 percent. Other distributions may not add exactly to totals because of rounding.

^a For four-person households, reported incomes for 1967, adjusted to dollars of 1968 purchasing power. For households of other sizes, incomes that permit an equivalent level of living.

percent of those in the lowest quartile and just over 70 percent of those in the highest quartile. Households of six or more persons account for 11 percent of those in the lowest quartile, but less than 1 percent of those in the highest quartile.

Finally, we may note that our reference income concept allows us to provide a statistical definition of a term widely and ambiguously used in public discussions of housing policy: the elusive "middle-income" household. To a statistician, the middle-income group in New York City would consist of those close to the median value of the reference income distribution (\$7,800) with no implications about the social or personal adequacy of that level of living. Others tend to think in terms of the level of income required to support a comfortable life; but since notions of comfort vary with experience, this concept is quite unstable.¹⁶

A statistical definition of "middle-income" renters might embrace the middle 50 percent of the reference income distribution, or perhaps only the middle third. The first standard is equivalent to the interquartile range, from \$4,600 to \$12,000. These figures are, of course, actual dollar incomes for a family of four. The level-of-living equivalent for a couple would be \$3,182 to \$8,688; for a family of six, from \$6,018 to \$15,312.¹⁷ We leave it to the reader to judge the adequacy of these incomes for a comfortable life in New York City.

¹⁶ Percy E. Sutton, Manhattan Borough President, was quoted in *The New York Times*, April 21, 1969, as having said that the middle-income range for residents of Manhattan was \$15,000 to \$25,000. "This is the new middle class here today, considering the realities of life in New York," he stated.

¹⁷ While these figures are for renter households only, corresponding figures for all households based on the same data source are not very different. We estimate the interquartile range of the reference income distribution for all households to be from \$4,900 to \$12,000, with a median value of \$8,230.

We should remind the reader, however, that there is some reason to believe that our data on household incomes understate the actual amount of income received, so that all these figures are on the low side, perhaps by as much as 10 percent.

SUMMARY

Survey data on the incomes of New York City's residents are plentiful but highly variable in coverage and quality. The most recent data available are based on a small but carefully interviewed sample taken in 1969. These data indicate that New Yorkers who work for a living are quite prosperous, though no more so than their counterparts in other large cities. Among families of three or more persons (almost all of which have one or more employed members), well over 40 percent reported 1968 incomes over \$10,000. Among unrelated individuals and two-person families, there are many who rely primarily on Social Security, pensions, or public assistance, and these comprise most of the City's low-income population. Thus, half of all unrelated individuals reported 1968 incomes under \$3,380 and a fourth reported incomes under \$1,620.

In economic terms, the decade of the 1950s might be called a Golden Age for New Yorkers; the median *real* income (money income adjusted for changes in purchasing power) for families increased by 44 percent and the median for unrelated individuals increased by 35 percent. Although money incomes continued to rise rapidly in the 1960s, most of the increase was offset by higher consumer prices. Between 1960 and 1969, the median real income of families increased no more than 11 percent and perhaps as little as 6 percent. Changes for unrelated individuals appear to have been of comparable magnitude.

Those unrelated individuals who lived alone in houses or apartments reported much greater gains in real incomes during the 1960s than did the group as a whole. This fact seems to reflect an odd change in the circumstances under which unrelated individuals live alone. In 1960, nearly 80 percent of the unrelated individuals with incomes under \$4,000 in 1968 purchasing power lived alone, while only 37 percent of those with incomes over \$4,000 did so. In 1968/1969, 80 percent of those with incomes *over* \$4,000 but only 60 to 70 percent of those with incomes *under* \$4,000 lived alone.

A major event of this decade has been the expansion of the City's program of public assistance, from 324,000 persons in 1960 to over a million in 1969, when some 13 percent of the City's residents were welfare clients. About 40,000 of these were under institutional care and 114,000 either lived alone or as members of a household containing no other welfare clients. The other 860,000-odd welfare clients were grouped into about 200,000 households, most of which consisted of an adult female with one or more dependent children. Welfare allowances typically amounted to about \$1,650 for a single person and \$600 for each additional person, placing almost all welfare-assisted households among the lowest fourth of income recipients within each household size. Thus, the growth of the welfare program has had little direct effect on the median income, serving mostly to raise individuals and families from indigence to a subsistence level. It has, perhaps, attracted poor immigrants, many of whom depend on public assistance for support during their first few years of residence.

In 1968/1969, welfare households accounted for about 37 percent of all households in the lowest quartile of the income distribution. Many of those not then

enrolled reported incomes below public assistance standards; if they were otherwise eligible and chose to apply, the welfare caseload could easily increase by 50 to 80 percent, mostly in the form of single persons and two-person families, but including about 50,000 families of three or more persons.

About 76 percent of the City's 2.8 million households live in rental quarters, the proportion rising to 89 percent for one-person households, and remaining above 60 percent for even the largest household sizes. Most low-income households and virtually all of those on welfare are renters, so that the incomes of renters tend to be substantially lower than the incomes of homeowners. However, renters outnumber homeowners at all levels of income, and at least 20 percent of all renters had 1967 incomes in excess of \$10,000.

The remainder of this volume will be concerned only with the City's 2.1 million renter households, of which 60 percent consist of either one or two persons. Among one-person renter households, three-fourths reported 1967 incomes below \$6,580, with a median value of \$4,100. For those of larger size, the upper quartile of income varied from \$8,550 to \$10,070, and the median varied from \$6,000 to \$7,300, the highest values in both cases being reported by households of four persons.

When the reported incomes of households of each size are adjusted to level-of-living equivalents for a "reference" household of four persons, the median reference income for all renter households is \$7,800; in other words, we estimate that half of all renters could afford to live better than a four-person household with that dollar income in 1968, and half could not. In these terms, two-person households appear to be better off as a group than any other size, and the median reference income declines sharply with household size. One-person households, whose dollar incomes are typically low, appear much more prosperous as a group when their limited budgetary responsibilities are thus taken into account. However, because one- and two-person renter households are so numerous, they still account for 60 percent of all renter households in the lowest quartile of the reference income distribution (below \$4,600), as well as 70 percent of those in the highest quartile (above \$12,000).

IV. RENT EXPENDITURES AND THEIR DETERMINANTS

Central to most discussions of rental housing policy is the question, how much rent can tenants afford to pay? It is, unfortunately, a question to which there is no scientific answer. Within the limits of available data, we can determine how much rent various types of tenants typically pay and, with less reliability, how much rent they would be willing to pay for housing of a particular type or quality. Whether these amounts are more or less than they can "afford" remains a matter of judgment.

This chapter describes the pattern of consumer spending for rental housing in New York City from several perspectives: how it has changed in recent years, how it varies among submarkets for housing, and how it varies among households of different types and income levels. That these patterns have prevailed in the past does not imply that they *should* prevail in the future. But understanding them does enable us to determine whether proposed programs affecting the housing market would allow particular groups in the community to spend less for housing than they are accustomed to spend, or would require them to spend more. Also, understanding existing patterns of housing expenditure provides us with some basis for judging how much households can "afford" to spend for housing.

Our first step is to review the distribution of monthly rent expenditures by renter households in New York City since 1950. As we will see, this pattern has changed over time, with a notable increase in the median outlay. There are many reasons for this increase, including inflation in the costs of supplying both new and existing housing, changes in the amounts of space occupied by individual households and in the quality of their dwellings, and changes in the mix of housing types and in the proportion of the total inventory covered by rent controls. These factors and their impacts on rents are to be analyzed in other volumes of this series. *Here we do not try to explain rent increases but to analyze the role of housing expenditures in family budgets.*

Consequently our second step is to examine the distribution of incomes among renter households over the same period. Obviously, a household's income is a major factor in any judgment of its rent-paying ability. Income differences among households do, in fact, account for most of the variations in their housing expendi-

tures. Because the customary measure of rent-paying ability is the ratio of gross rent to gross income, we combine the data on rent expenditures with that on household incomes to show the distribution of households by rent/income ratios since 1950.

Rent/income ratios vary considerably, and our next task is to account for these variations. We confine this phase of the analysis to 1968, a year for which we have access to the unit (household) records of the New York City Housing and Vacancy Survey. Briefly, we distinguish four housing submarkets in New York City: controlled and uncontrolled, in Manhattan and in other boroughs. We argue that in each of these markets, consumers face distinctively different supply conditions which influence their housing expenditures. Within each market, variations in expenditure are determined largely by differences in income and in characteristics such as the age, sex, and ethnic background of the head of the household and the size of the household. By means of multiple regression analysis of data for individual households, we are able to isolate the relationship of each of these factors to housing expenditures. The results are in many ways surprising.

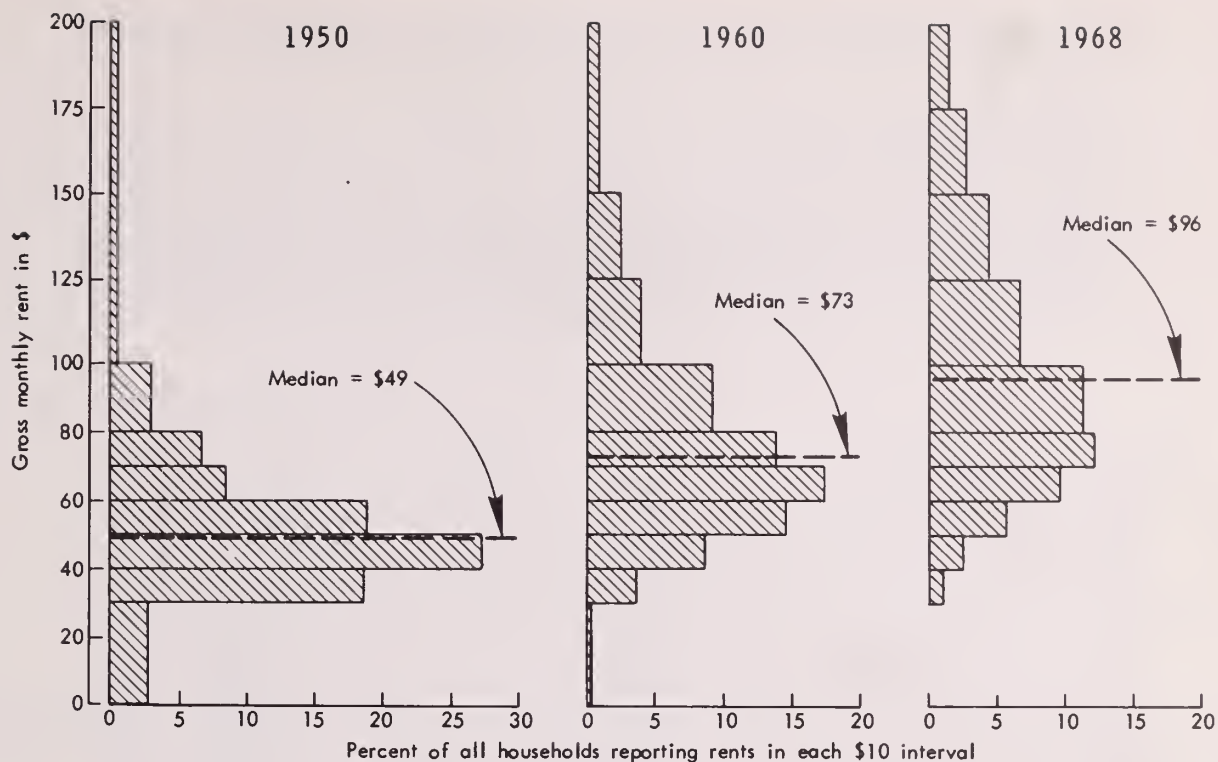
TRENDS IN RENTS AND INCOMES, 1950-1968

Gross Monthly Rent Expenditures

The housing expenditures of renter families may be measured either by contract or gross rent. Contract rent is the amount paid by the tenant to the landlord. Gross rent is contract rent plus any utilities paid directly by the tenant. The Bureau of the Census collects both figures in its housing surveys.

The advantage of using contract rent as a measure of housing expenditures is that it is almost always a fixed monthly amount, easily remembered by the respondent. However, contract rent may or may not include the cost of heating fuel, cooking fuel, water, and electricity. Virtually all large apartment buildings in New York City have central heating, the cost of which is included, along with water charges, in contract rent; cooking gas and electricity are usually metered to individual apartments and are paid by the tenant. In small buildings and single-family homes, heat and water are often paid by the tenant. To achieve comparability among rent expenditures, it is therefore helpful to add to contract rent the tenant's estimate of the average monthly costs of those utilities he pays directly. In 1968, the cost of tenant-paid cooking gas and electricity, the items usually excluded from contract rent, nearly always fell between \$5 and \$15 per month.

Figure 12 shows the distributions of renter households by gross monthly rent expenditures in 1950, 1960, and 1968. The data for 1950 and 1960 were gathered as part of the decennial censuses of housing and are based, respectively, on 20 and 25 percent samples of all renter-occupied housing units. In 1950, about 6 percent of all respondents either paid no cash rent or failed to supply all the information needed to compute gross rent. In 1960, about 2 percent paid no cash rent; to each unit for which full gross rent information was not reported, the Bureau of the Census assigned the gross rent of the first preceding housing unit that did report.



SOURCE: Appendix Table C-1.

Fig. 12—Percentage distribution of renter households, by gross rent expenditures: New York City, 1950-1968

The data for 1968 were gathered by the Bureau as part of the New York City Housing and Vacancy Survey of that year, and are based on a sample of 1.2 percent of all occupied rental housing units.¹ Again, about 2 percent of the sample reported no cash rent. About 8 percent failed to report gas and electric utility expenditures that were not included in contract rent. For these, we estimated utility expenditures using a formula involving the number of rooms in the unit. The formula is reliable within a few dollars for almost all cases.²

As the figure shows, the median gross rent expenditure doubled between 1950 and 1968, growing at the rate of 4.0 percent per year in the 1950-1960 period, and 3.5 percent per year between 1960 and 1968. As of 1968, the median gross rent

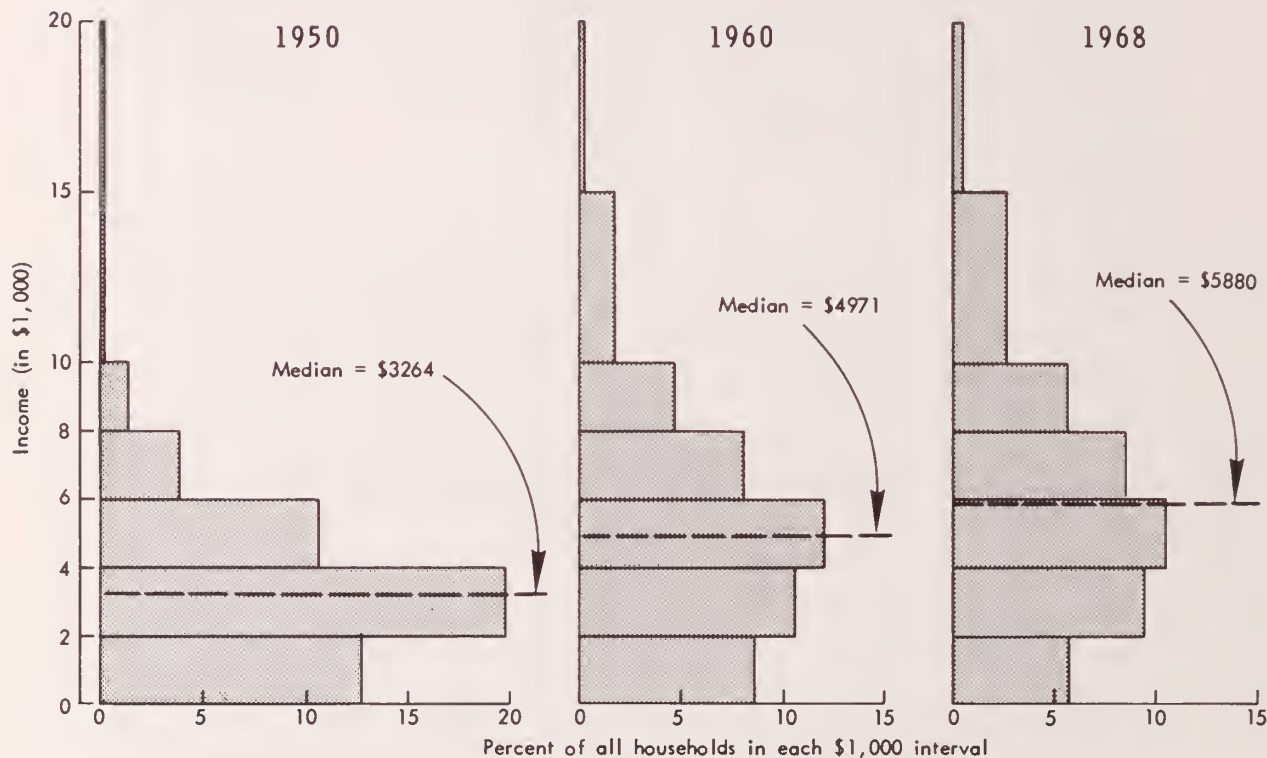
¹ Although similar data are available from the New York City Housing and Vacancy Survey of 1965, we have not used them in the analyses reported in this chapter, choosing instead to focus our analytical efforts on the 1968 data file. Considerable editing was needed to make these special survey data reasonably comparable with the data from the decennial censuses, and concentration on the more recent of the two surveys seemed more profitable than dividing the effort between them.

² See Appendix C for details.

expenditure was \$96 per month, with an interquartile range of \$59. A fourth of all households spent less than \$75 and a fourth spent more than \$134.

Incomes of Renter Households

Figure 13 shows the distributions of renter households by income in current dollars for 1950, 1960, and 1968. Our data sources are the decennial censuses of 1950 and 1960 and the New York City Housing and Vacancy Survey of 1968, with sampling rates of 20, 25, and 1.2 percent, respectively.



SOURCE: Appendix Table C-2.

Fig. 13—Percentage distribution of renter households, by income of head and related persons: New York City, 1950-1968

The payments included as income are those described in Ch. III. In some cases, household income is understated because the Bureau of the Census's household tabulations show only the incomes of the head of the household and household members related to the head; the incomes of lodgers, resident employees, and resident nonrelatives are excluded. The understatement is not serious: in 1968,

for example, fewer than 3 percent of all renter households included nonrelatives of the head, and not all of these were income recipients.³

From these data, it appears that the median income of renter households increased by 80 percent between 1950 and 1968, growing at a compound rate of 4.1 percent annually from 1950 to 1960 and 2.2 percent thereafter. In 1968, the median renter income was \$5,880. A fourth of all renter families had incomes under \$3,500 and a fourth had incomes over \$9,220. We should point out that these figures have not been adjusted for changes in the purchasing power of the dollar, nor for changes in the size-distribution of renter households.

Rent/Income Ratios

In 1950, the ratio of median rent to median renter income in New York City was .18. During the decade, median rent increased by 49 percent and median income increased only slightly more, by 52 percent. Consequently, the *ratio of median rent to median income* did not perceptibly change over the decade. Between 1960 and 1968, however, the median rent increased by 32 percent as compared with an increase of only 18 percent in median income. The *ratio of median rent to median income* rose to .19. It is important not to confuse this change with changes in the *median rent/income ratio*, which may be quite different under the same circumstances. The two calculations are unlikely to lead to the same result unless households arrayed according to rent expenditure fall precisely in the same order as households arrayed according to income, a condition that is not generally met.

In this section, we will examine trends in the distribution of rent/income ratios as computed for individual households. Our sources are the same as those used in constructing Figs. 12 and 13 and thus fall heir to all the defects present in both the rent and the income data. For 1950 and 1960, the Bureau of the Census computed rent/income ratios for each household reporting both rent and income. For 1968, we computed these ratios from the rents and incomes reported on the unit records of the Housing and Vacancy Survey.

The data for 1950 and 1960 are taken from published tabulations, a fact which limits our ability to improve their comparability. In 1950, the Bureau computed rent/income ratios for about 80 percent of its sample. Reasons for not computing the ratio included failure to report rent or income; monthly rent recorded only as greater than \$999 or annual income reported only as greater than \$9,999; no cash rent; or income less than \$100. In 1960, the Bureau used missing-value programs to assign rents and incomes in the event that these were not reported; rent/income ratios were computed for 95 percent of the sample households, omitting only those reporting no cash rent or no income (or net loss).

The data for 1968 are the least satisfactory. With access to the unit records, we were able to fill in most missing gross rents, but were unable to assign incomes

³ Other qualifications on these income data, particularly those derived from the 1968 Housing and Vacancy Survey, are discussed in Ch. III and Appendix B. Briefly, all three sources understate incomes, and the 1968 survey was plagued by a high rate of nonresponse to questions about income.

to households that failed to report them. About 58 percent of all renter households reported their incomes and we were able to compute rent/income ratios for nearly all of those that paid cash rent.

To make the data for these 3 years as comparable as possible, we allocated households for which rent/income ratios were not computed to rent/income classes, except for those paying no cash rent. In 1950 and 1960, some groups for whom the Bureau did not compute ratios can be assigned with considerable assurance to a particular rent/income class; for cases in which rent or income was not reported, however, we fell back on proportional allocation. The required leap of faith is greatest, of course, for 1968. The results of these allocations are shown in Table 13; the procedures are documented in Appendix Tables C-3 and C-4.

Table 13
PERCENTAGE DISTRIBUTION OF RENTER HOUSEHOLDS BY
RENT/INCOME RATIO: NEW YORK CITY, 1950-1968

Ratio of Gross Annual Rent to Gross Annual Income	1950	1960	1968
Under .10	11.0	14.1	10.4
.10-.14	23.8	21.7	16.5
.15-.19	20.4	18.7	21.4
.20-.24	19.7	11.9	15.6
.25-.29		7.4	9.3
.30-.34	25.1	4.5	6.4
.35 or more		21.7	20.4
Total	100.0	100.0	100.0
Median rent/income ratio	.187	.188	.205
Interquartile range	.171	.188	.170
Upper limit	.300	.313	.314
Lower limit	.129	.125	.144

SOURCE: Appendix Table C-4.

NOTE: Median and quartile values were estimated by linear interpolation within rent/income intervals. Distributions exclude rental tenants paying no cash rent.

These estimates indicate that between 1950 and 1960, the distribution of households by rent/income ratio became more dispersed but the median value did not change significantly; between 1960 and 1968, the distribution became more compact and the median value increased slightly. Shifts in the median and quartile values are generally small, and because of the poor quality of the data, must be regarded with skepticism.⁴ The strongest conclusion to be drawn from these data is

⁴ See Appendix C for comparison with other estimates derived from the same data.

that over a period of 18 years, rent/income ratios for residents of New York City have changed very little.

Between 1950 and 1960, the number of renter households increased by about 170,000, but there was very little change in the number whose rent/income ratios fell between .10 and .30. The increase was divided between the extremes of the distribution, with an additional 82,000 households reporting ratios under .10 and 66,000 reporting ratios of .30 or more. In both years, the median value was just under .19.

Between 1960 and 1968, the number of renter households increased very little (18,000), but there was a major shift from the lowest rent/income categories to the intermediate categories. The number of households reporting ratios under .15 decreased by 176,000, or from 36 to 27 percent of the total. The shift extended far enough up the scale to raise the median from just under .19 to somewhere between .20 and .21.

One is, of course, tempted to try to relate these changes to the shifts in rents recorded in Fig. 12 and/or to the shifts in incomes recorded in Fig. 13. We have not found the effort fruitful: There are too many alternative ways of arriving at a given result in terms of rent/income ratios. When rent/income ratios differ among households, or for a given household at two points in time, this difference may reflect differences in rent expenditures or differences in income, or both. Moreover, differences in rent expenditures sometimes reflect differences in the price of housing, sometimes differences in the quantity or quality of housing consumed; usually price, quantity, and quality differences are all involved. In short, trends in rent/income ratios must be interpreted cautiously; a rising trend does not necessarily imply a falling standard of living, nor does a falling trend necessarily imply a rising standard of living.

The Role of Welfare Rent Assistance

We can, however, show the impact of the City's rapidly growing welfare caseload on the pattern of rent/income ratios in 1968. The survey data reported in Table 13 include households receiving public assistance. In 1968, these amounted to about 14 percent of all renter households. Because of the structure of public assistance grants, rent/income ratios of welfare families cannot be interpreted in the same way as those of nonwelfare families, i.e., as measures of budgetary strain.

The housing aspects of the welfare program will be discussed at length in Vol. IV. For present purposes it suffices to note that a welfare client is generally granted a rent allowance equal to the contract rent of the apartment or house that he occupies. His allowance for food, clothing, and other items is calculated separately. If he moves, or if his rent is increased, his rent allowance will change, but the rest of his public assistance grant is unaffected. Consequently a high rent/income ratio does not imply that a welfare client is depriving his family of food or clothing in order to pay his rent, and a low ratio does not imply that he is economizing on housing in order to consume other goods. It is therefore useful to distinguish welfare

recipients from other renter households in appraising the budgetary impact of housing expenditures.

In Ch. III, we described a study conducted by the City's Bureau of the Budget which compiled data on the incomes of households receiving public assistance on 1 July 1969. The contract rents paid by these welfare clients were also recorded. Multiplying contract rents by 1.06 to approximate gross rents, we have used these data to estimate the distribution of welfare households by gross rent/income ratio.

Our estimates are shown in Table 14. Of 296,000 welfare households paying cash rent, over 83 percent reported rent/income ratios of .25 or more and nearly 56 percent reported ratios of .35 or more.

Table 14
DISTRIBUTION OF WELFARE HOUSEHOLDS BY RENT/INCOME
RATIO: NEW YORK CITY, 1969

Ratio of Gross Annual Rent to Gross Annual Income	Thousands of Households	Percentage Distribution
Under .10	1.0	0.4
.10-.14	7.6	2.5
.15-.19	17.8	6.0
.20-.24	23.4	7.9
.25-.29	39.7	13.4
.30-.34	41.5	14.0
.35 or more	165.0	55.7
Total paying cash rent	296.2	100.0
No cash rent	17.9	—
Total	314.1	—

SOURCE: Appendix Table C-6.

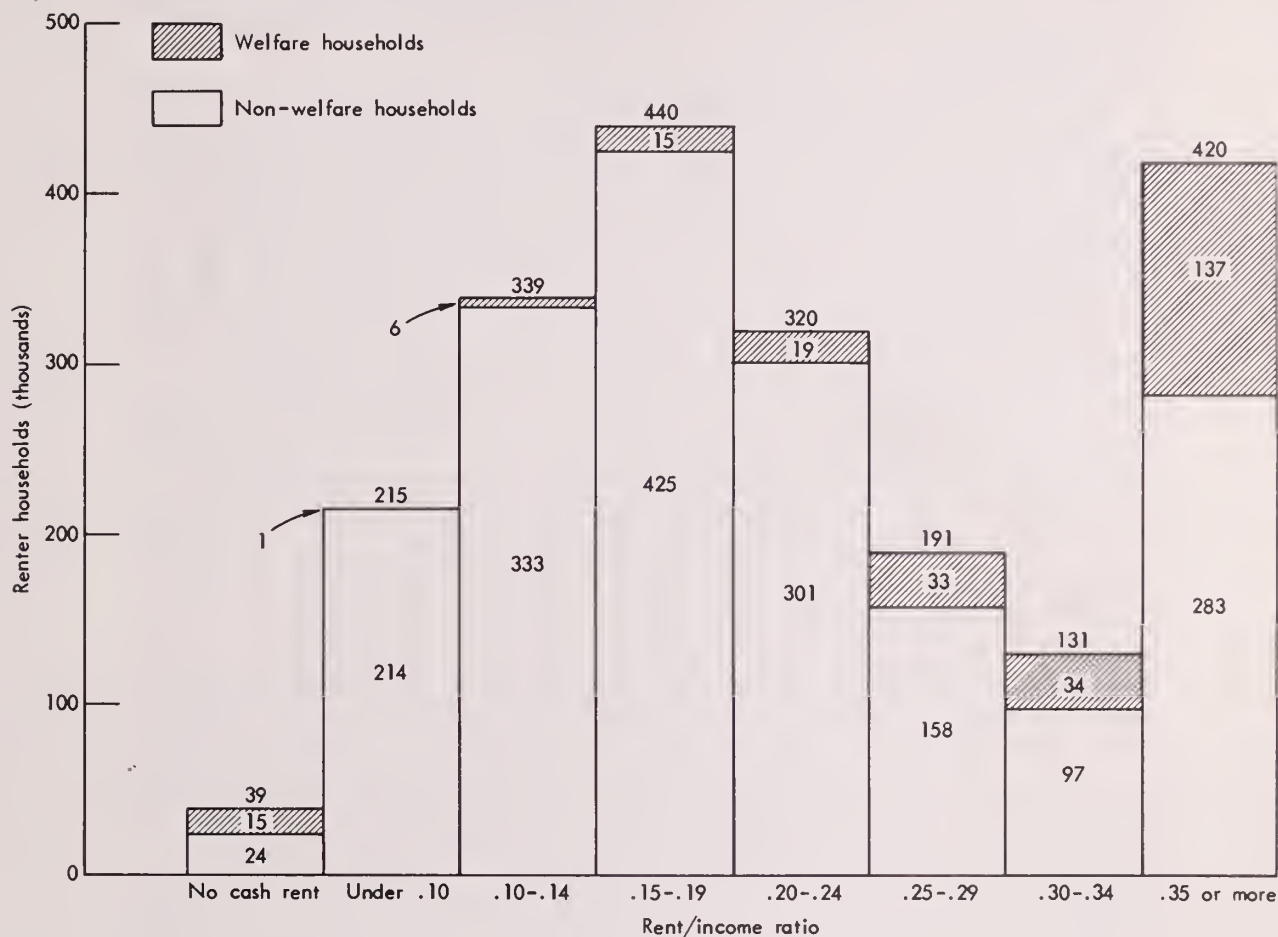
NOTE: Distributions may not add exactly to totals because of rounding.

These data cannot be meshed precisely with data from the Housing and Vacancy Survey of 1968. For one thing, "household" definitions differ; for another, the welfare caseload increased by nearly 21 percent in the intervening 14 months; finally, financial data gathered by such different procedures are bound to be less than perfectly comparable. However, even a rough comparison is enlightening, so we have adjusted the count of welfare households to May 1968, the approximate reference date of the Housing and Vacancy Survey. Procedures are documented in Appendix C.

Our division of 1968 renters into welfare and nonwelfare households is shown in Fig. 14.⁵ When welfare households are excluded, the numbers and proportions of

⁵ A preliminary version of Fig. 14 was published in Vol. I of this series. Data subsequently obtained led us to make minor changes in the division between welfare and nonwelfare households in each rent/income interval.

cases in the higher rent/income intervals are sharply reduced; the median rent/income ratio falls from more than .20 to about .19. Over 70 percent of the nonwelfare renters have rent/income ratios below .25.



SOURCE: Appendix Table C-6.

Fig. 14—Numbers of renter households on welfare and not on welfare, by rent/income ratio: New York City, 1968

This still leaves some 538,000 nonwelfare households paying more than a fourth of their incomes for rent. Not all of these are low-income families, but we estimate that about 375,000 of them had annual incomes below \$5,000; about 145,000 had incomes between \$5,000 and \$10,000; and about 20,000 had incomes of \$10,000 or more.

RENT EXPENDITURES IN FOUR HOUSING SUBMARKETS

In the preceding pages we indicated that household income is both an important determinant of rent expenditure and a relevant standard for assessing rent-paying ability. But the simple correlation between rent expenditure and income is far from perfect; at every level of rents we find a wide range of incomes represented. Clearly, factors other than income must play a role in household decisions about rent expenditures.

We have tried to identify these factors and show their influence by means of multiple regression analysis of data drawn from the 1968 Housing and Vacancy Survey. Because we had access to the survey records for individual households, it was possible to avoid many of the ambiguities of analysis based on cross-tabulations. The household characteristics available from that source and used in this analysis are household size and income and the age, sex, and ethnic background of the head of the household. The relationships between these variables and gross rent expenditures were analyzed separately for tenants of controlled housing and tenants of uncontrolled housing; within each of these groups, we further distinguished residents of Manhattan and residents of other boroughs. We thus allowed for the possibility that the relationships among household income, household characteristics, and gross rent expenditures are different in each of these four submarkets.

There are, of course, many more than four distinguishable housing submarkets within the City. Other evidence indicates, for example, that the prices of comparable housing in the outlying boroughs differ perceptibly from borough to borough, though these differences are not nearly so dramatic as the distinction between housing in Manhattan and that in the other boroughs. Even within a borough, neighborhood housing markets may be distinguished. We are confident, however, that the four submarkets named are the most important for broad policy analysis.

After repeated trials, we found that our best statistical descriptions of the relationships among rent, income, and household characteristics used the ratio of gross rent to gross income as the dependent variable; and as independent variables, household characteristics and the inverse of income. The model accounted for over 81 percent of the variance in rent/income ratios for tenants of both controlled and uncontrolled housing outside Manhattan, 66 percent for Manhattan controlled housing, and 56 percent for Manhattan uncontrolled housing. Almost all of the explained variance could be attributed to the income variable; however, in Manhattan uncontrolled housing, 8 percent of the explained variance was attributed to other household characteristics, primarily the ethnic background of the household head.

For convenience in discussing the principal findings, we have transformed the model so that the dependent variable can be presented as gross monthly rent expenditures. A full technical description of the data base and the regression models is presented in Appendix C.

Variations with Income, by Sex and Ethnicity of Household Head

When household characteristics are held constant, gross rent expenditures increase with household income, but less than proportionately. Consequently, rent/income ratios characteristically decline as income rises. This is true in all four submarkets, but with differences in the rate at which rent expenditures rise (rent/income ratios fall) as income increases.

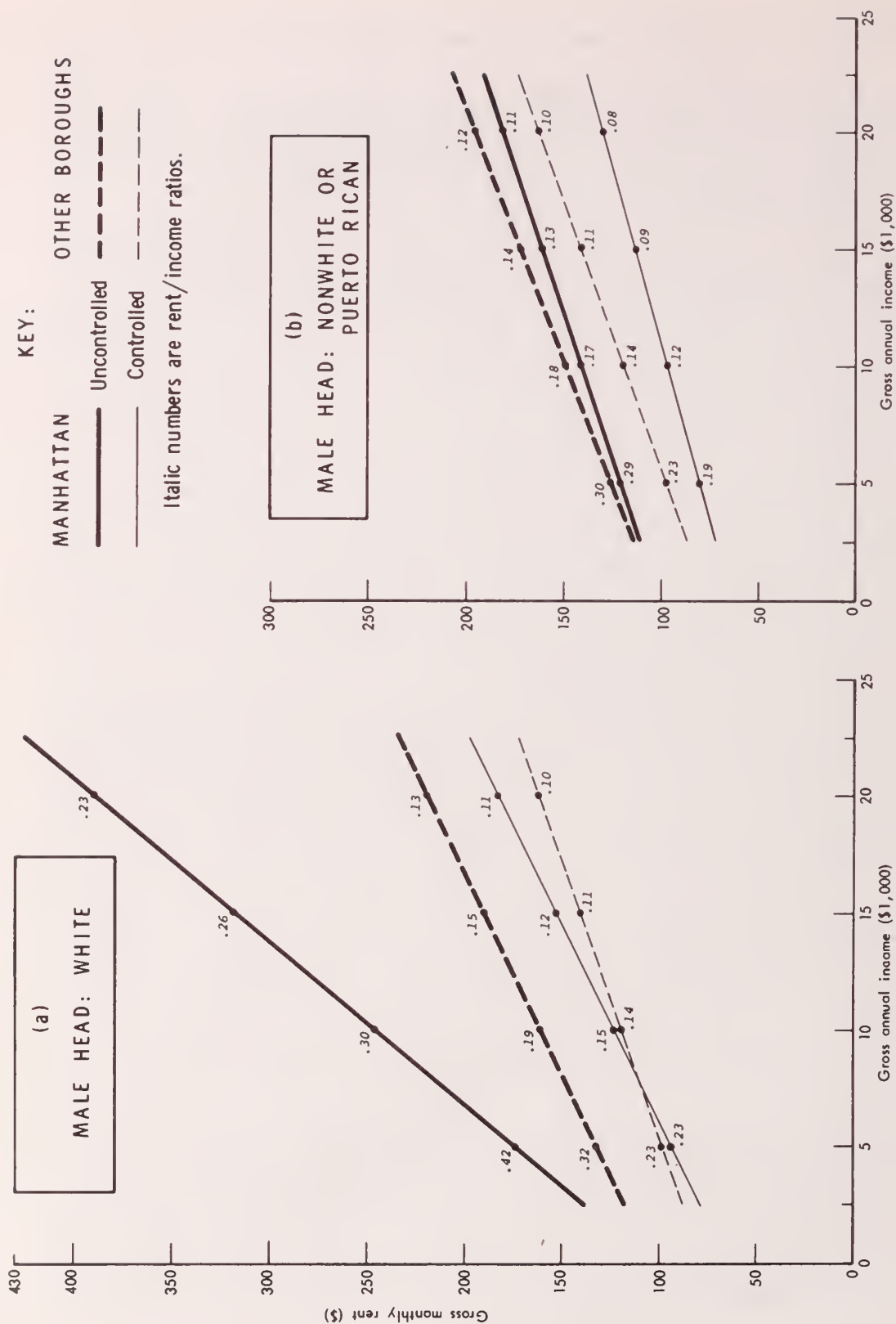
Households Headed by White Males. Figure 15(a) shows these relationships for four-person households headed by white males 42 years of age. In the *controlled sector*, rent expenditures by such households in Manhattan are nearly identical with those in the outlying boroughs over the entire range of incomes, and the rate of increase with income is low: on an annual basis, rent expenditures increase only by 6 or 7 cents for each additional dollar of income. With an income of \$5,000, such a household typically spends 23 percent of its income for rent; with an income of \$10,000, the proportion drops to about 15 percent. (Rent/income ratios at selected income levels are shown by italic numbers in this and subsequent figures.)

A family of this type living in *uncontrolled housing outside Manhattan* typically pays \$30-\$40 more per month in rent than its counterpart in controlled housing, but the rate at which rent expenditures increase with income is not very different in the two submarkets. Over the entire range of incomes, the tenant of uncontrolled housing pays a larger proportion of his income for rent than does the tenant of controlled housing: about 32 percent at \$5,000, falling to 19 percent at \$10,000 and 15 percent at \$15,000.

Except at very low levels of income, rent expenditures by families of this type living in *uncontrolled Manhattan apartments* are much higher than those of such families in any of the other three submarkets. For tenants of uncontrolled Manhattan apartments, about 18 cents of each additional dollar of income goes for housing (in contrast to the 6 or 7 cents characteristic of families in the other submarkets). Rent/income ratios are quite high throughout the income range; even at incomes of \$20,000, about 23 percent (\$400 per month) goes for rent.

Households Headed by Nonwhite or Puerto Rican Males. Figure 15(b) shows the same set of relationships of rent to income for a family of four headed by a nonwhite or Puerto Rican male, age 42. In other words, this illustrative family differs from that of Fig. 15(a) only in ethnic background. The similarities of these schedules with those of white families are strong; but the differences, too, are striking.

Outside of Manhattan, the relationships of rent to income for these ethnic minorities are virtually identical with those for whites, in both controlled and uncontrolled housing. For *residents of Manhattan*, differences emerge. The most striking is that Manhattan nonwhites and Puerto Ricans in both controlled and uncontrolled apartments typically spend less for housing than their counterparts in the other boroughs. Whereas for whites, annual rent expenditures for uncontrolled housing in Manhattan increase very rapidly with income (18 cents per dollar), for nonwhites and Puerto Ricans, the rate of increase is actually less than for controlled Manhattan housing. In fact, in all four submarkets, annual housing expenditures



SOURCE: Appendix Table C-8.

Fig. 15—Gross rent expenditures as a function of income: four-person households headed by males 42 years of age

by nonwhites and Puerto Ricans increase by only 4 to 7 cents for each added dollar of income.

Households Headed by Females. Figures 16(a) and (b) show relationships of rent to income for white and for nonwhite/Puerto Rican households headed by females, but otherwise of the same composition as those represented in Figs. 15(a) and (b), respectively. *Outside of Manhattan*, these relationships are not significantly different in either level or slope from those for male-headed households. *In Manhattan*, however, households headed by females, both white and nonwhite or Puerto Rican, tend to spend more on housing at each level of income than their male counterparts. This is true for tenants of both controlled and uncontrolled apartments.

Summary. The basic finding illustrated in Figs. 15 and 16 is that rent expenditures increase with income for each type of family in all four of the City's major submarkets for housing, but rent/income ratios fall as income increases. This finding is quite consistent with a large body of data on consumer expenditure patterns in the United States and hardly requires explanation.

A second unsurprising finding is that tenants of uncontrolled housing almost always pay more than tenants of controlled housing even when income, family characteristics, and location are held constant. In the outlying boroughs, this premium ranges from about 25 percent to 40 percent, and is about the same for nonwhites and Puerto Ricans living in Manhattan. For whites living in Manhattan, however, the premium for uncontrolled housing is much greater, ranging from about 50 percent to about 100 percent, depending on income and family type.

We do not mean to suggest that a family living in a controlled apartment gets housing that is equivalent in quality to that enjoyed by a counterpart family living in uncontrolled housing. Generally speaking, the controlled housing is older and less well-maintained. Evidently, however, its low rent makes it an acceptable substitute. Our finding does seem to suggest that controlled housing is a considerable bargain, especially in Manhattan.⁶

Perhaps the most surprising discovery is that in all four housing submarkets, at every level of income, nonwhites and Puerto Ricans spend less for housing than their white counterparts. We cannot say from these data whether the housing they occupy is equivalent in quantity or quality to that occupied by their white counterparts, but if, as we suspect, it is worse housing, it also costs substantially less.

Another striking feature of Figs. 15 and 16 is that the ethnic group and sex of the household head affect the rent/income ratio much more strongly in Manhattan than in the outlying boroughs. This is illustrated in Table 15, for households with incomes of \$5,000. In Manhattan, we find that whites spend more than nonwhites and Puerto Ricans, and in both ethnic groups, females spend more than males. Outside Manhattan, there are only faint traces of this particular ordering.

⁶ In Ch. V, we try to measure the magnitude of this bargain by estimating the competitive market prices of controlled housing of various types.

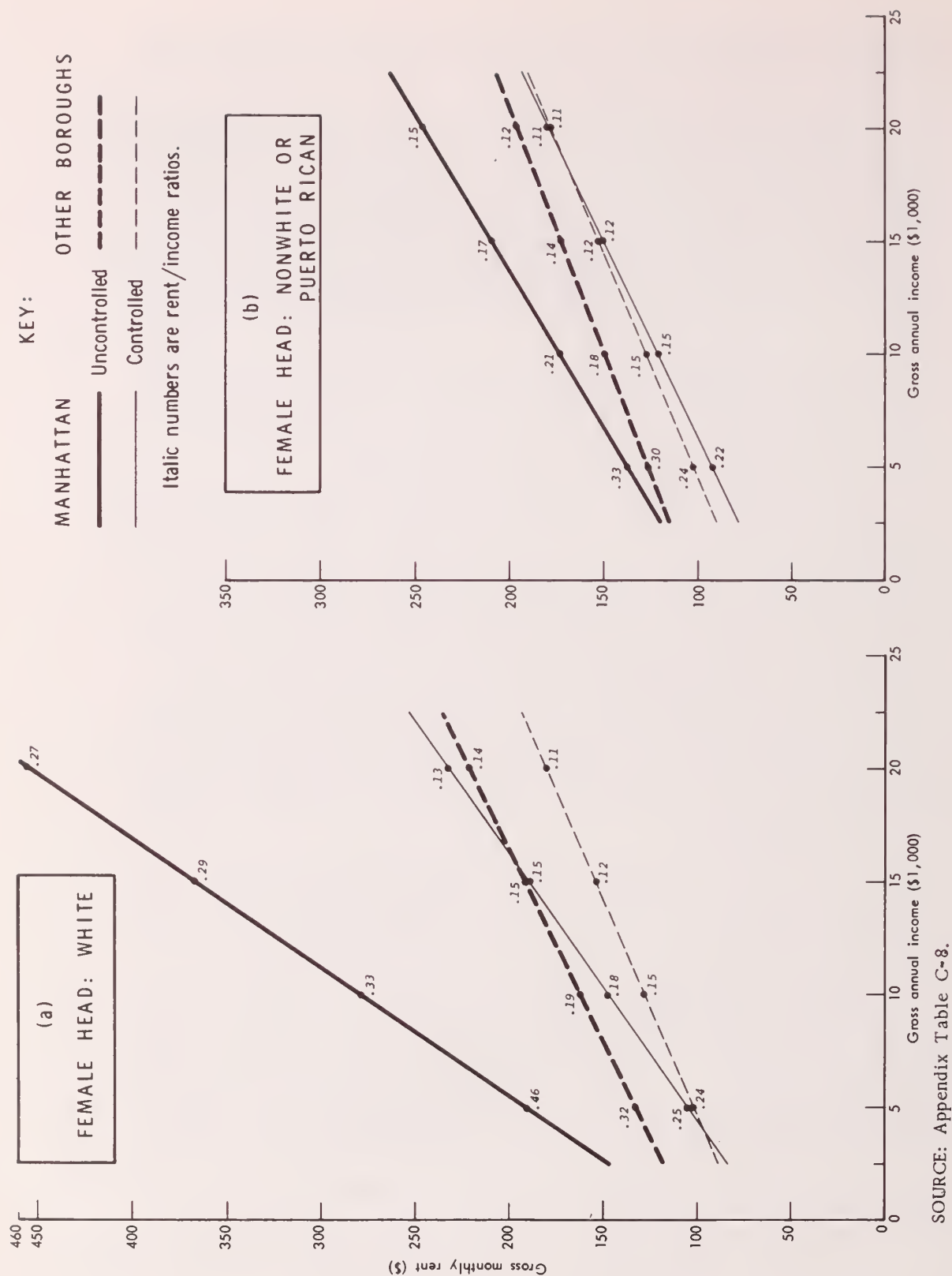


Fig. 16—Gross rent expenditures as a function of income: four-person households headed by females 42 years of age

Table 15
COMPARISON OF TYPICAL RENT EXPENDITURES BY ETHNIC GROUP AND SEX OF
HOUSEHOLD HEAD: MANHATTAN AND OTHER BOROUGH, 1968

Ethnic Group, Borough, and Sex of Household Head	Controlled Housing		Uncontrolled Housing	
	Annual Rent Expenditure	Rent/Income Ratio	Annual Rent Expenditure	Rent/Income Ratio
<i>Manhattan</i>				
White				
Female	\$1,273	.25	\$2,285	.46
Male	1,127	.23	2,090	.42
Nonwhite or Puerto Rican				
Female	1,113	.22	1,652	.33
Male	967	.19	1,457	.29
<i>Other Boroughs</i>				
White				
Female	1,222	.24	1,585	.32
Male	1,171	.23	1,581	.32
Nonwhite or Puerto Rican				
Female	1,218	.24	1,510	.30
Male	1,168	.23	1,506	.30

SOURCE: Calculated from data in Appendix Table C-8.

NOTE: All entries are for four-person households with annual incomes of \$5,000, whose heads are 42 years of age.

Variations with Household Size

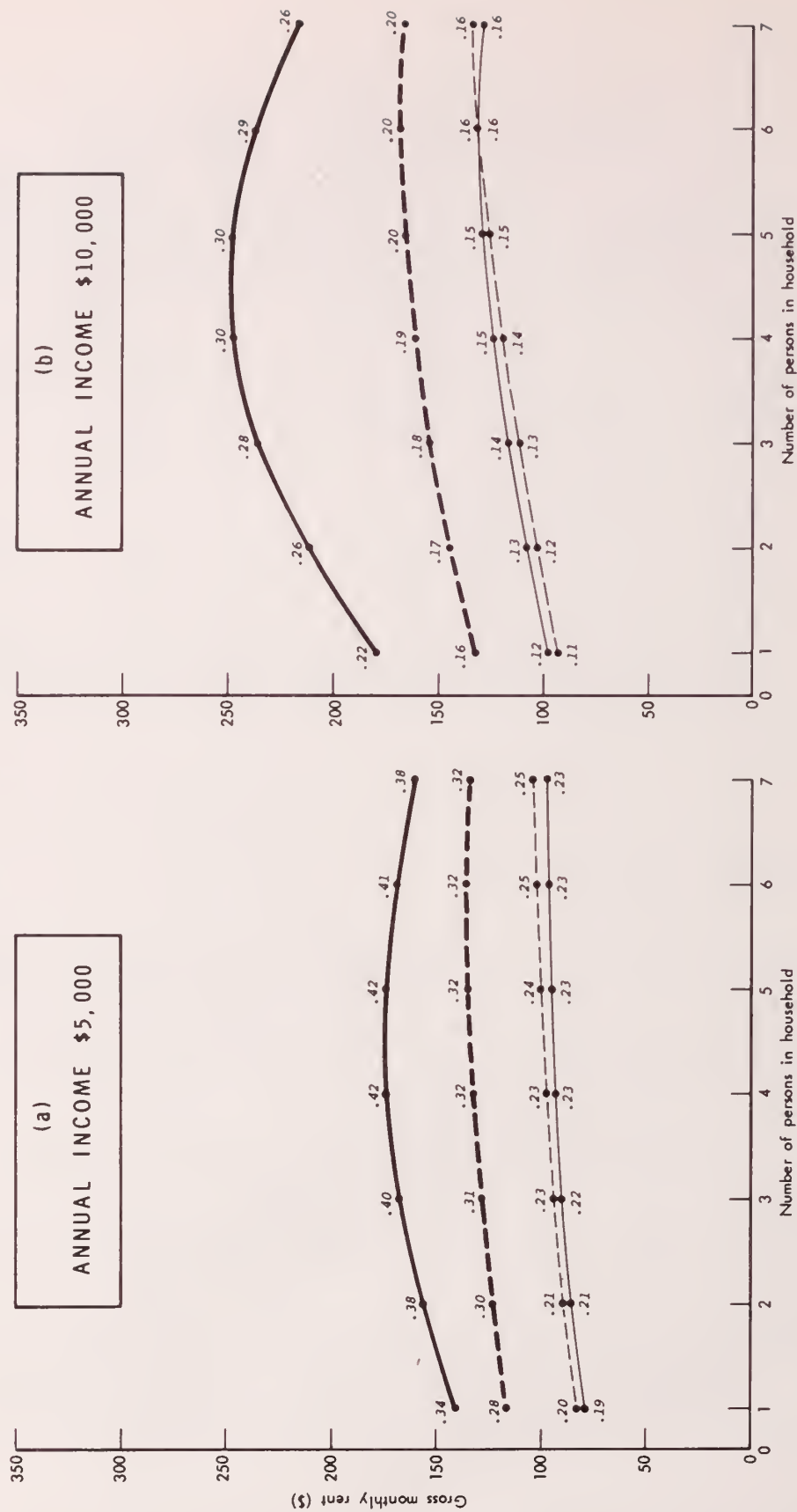
Figures 15 and 16, discussed above, showed rent/income relationships for four-person households. That household size was arbitrarily chosen for illustrative purposes; it is in fact larger than the average for renter households in any of the four submarkets. At other household sizes, the rent/income schedules would have the same general configuration, with slight differences in the slope of the lines. Now, we will hold income and other household characteristics constant and examine the influence of household size on rent expenditures.

Figure 17(a) shows the schedules of typical rent expenditures for households of various sizes headed by white males, 42 years of age, with annual incomes of \$5,000; the italic numbers in the figure are rent/income ratios, shown for each size of household. For tenants of controlled housing, rent expenditures at each household size are about the same whether the household lives in Manhattan or in an outlying borough. The basic outlay for a one-person household is about \$1,000 annually or \$80 to \$85 per month. This sum increases by about \$5.50 per month when a second person is added, \$4.50 for a third person, \$3.60 for a fourth, and so on.

While the space required to accommodate two persons at a given level of comfort is not really much greater than that required by a single person, further

KEY: MANHATTAN OTHER BOROUGHS
 — Uncontrolled — — — — —
 — Controlled — — — — —

Italic numbers are rent/income ratios.



SOURCE: Appendix Table C-8.

Fig. 17—Gross rent expenditures as a function of household size: households headed by white males 42 years of age

increases in household size do call for added space. It is perhaps surprising to find that, all other things equal, a family of five typically spends only \$17 per month more than a person living alone. We think that this result reflects two factors.

First, these schedules assume the same income (\$5,000) for all sizes of household. The larger family's added requirements for food, clothing, etc., militate against diversion of a greatly increasing share of a fixed budget to housing as family size increases. More space can often be obtained without much increase in rent by choosing accommodations that are inferior in other respects. Second, in the controlled sector, the relationship between apartment size and rent is likely to be particularly weak inasmuch as the ceiling rents of different apartments depend more on their histories of tenant turnover than on their relative desirability as living accommodations.

The second explanation loses force, however, when we consider the relationship between rent expenditure and household size in uncontrolled housing outside Manhattan. At every family size, the tenants of uncontrolled housing typically pay about a third more than tenants of controlled housing, but the amount of the increase in rent expenditures as persons are added to the household is just as small in this sector of the uncontrolled market as in the controlled sector. Only for tenants of uncontrolled apartments in Manhattan are the marginal monthly outlays significantly larger than the \$5.50, \$4.50, \$3.60 sequence described above. Even here, they are surprisingly modest: \$16.40, \$11.10, and \$5.80 for the second, third, and fourth members, respectively. The peak outlay in this sector of the market is by families of four to five persons; larger families typically spend less.

As Fig. 17(b) shows, these patterns are not unique to families of modest income. With annual incomes of \$10,000, families of every size in every submarket typically spend more than their counterparts with incomes of \$5,000, but the marginal outlay for each added family member remains modest. A family of five persons spends about \$33 per month more than a person living alone, except for tenants of uncontrolled housing in Manhattan, where the differential is \$68.

Variations with Age of Household Head

The relationships of rent to income shown in Figs. 15 and 16 are for households headed by a person 42 years of age, slightly below the average for tenants of uncontrolled housing and about 6 years less than the average for tenants of controlled housing. Again, the choice of some other age would not have changed the basic configuration of the schedules shown in Figs. 15 and 16, although the slope of each schedule would have been somewhat altered.

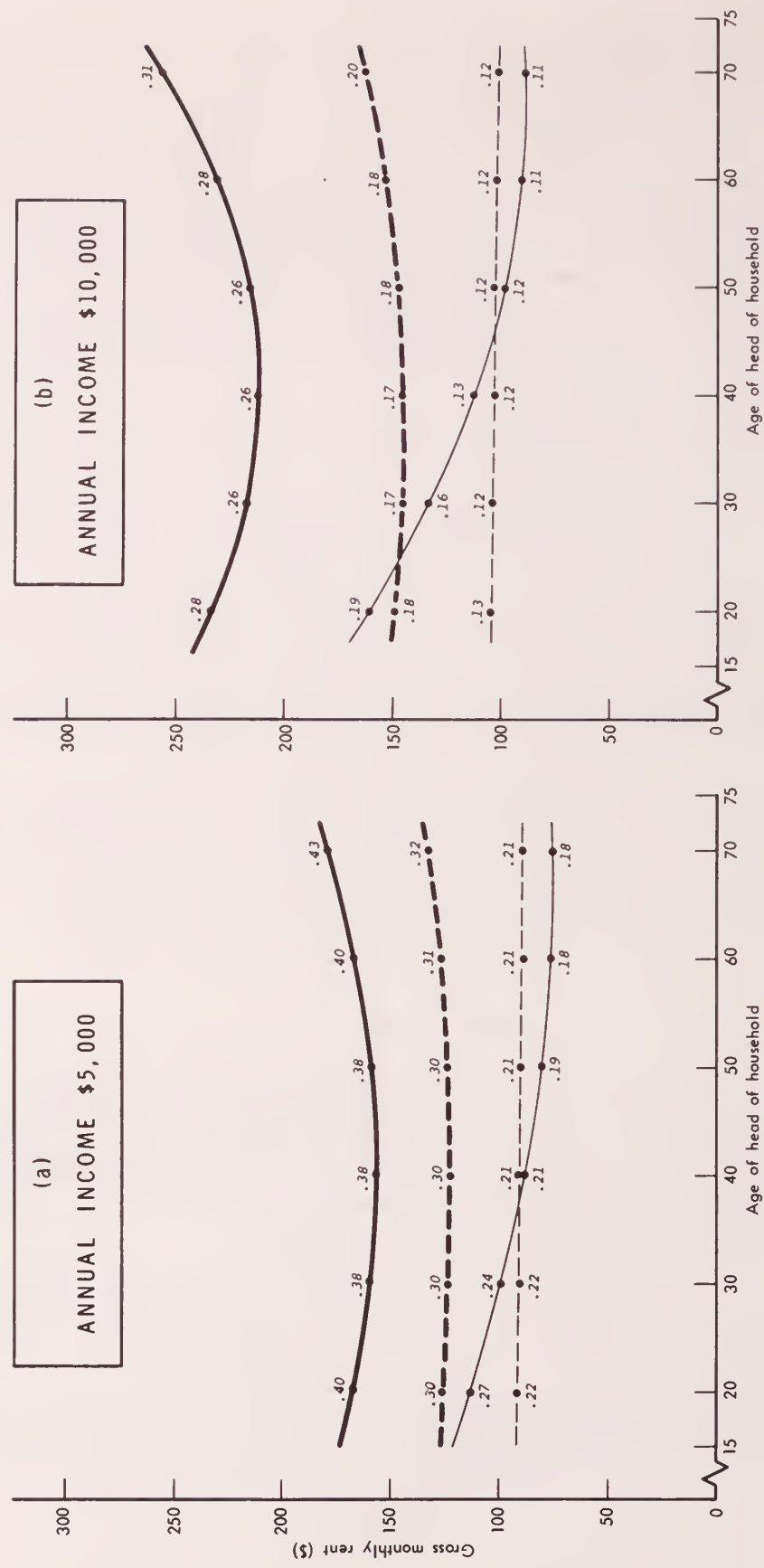
We now examine directly the relationship between age of household head and rent expenditure, holding income and other household characteristics constant. Figure 18(a) shows the relationship between rent and age for two-person households headed by white males with annual incomes of \$5,000. (A two-person rather than a four-person household was used for this illustration because there are very few four-person households at the extremes of the age-distribution.) Again, the numbers in italics are rent/income ratios, shown for selected ages of the household head.

KEY: MANHATTAN OTHER BOROUGHES

— Uncontrolled - - - - -

— Controlled - - - - -

Italic numbers are rent/income ratios.



SOURCE: Appendix Table C-8.

Fig. 18—Gross rent expenditures as a function of age of head: two-person households headed by white males

Outside of Manhattan, the age of the head of the household has very little effect on rent expenditures by families of a given size and income. For residents of Manhattan, age has a more visible relationship to rent expenditures. The form of the relationship differs for tenants of controlled and uncontrolled housing. For the latter group, the young and the old typically pay more than those of middle age. In controlled housing, rent expenditures decline consistently with age.

As Fig. 18(b) shows, this pattern holds for prosperous families as well as those of modest means. The only submarket in which the age of the household head makes a substantial difference in rent expenditures is the controlled market in Manhattan. An explanation offers itself: The older families in controlled housing, if they have not moved for many years, pay especially low rents because the primary mechanism for raising ceiling rents has been the tenant turnover provision. But if we accept this explanation, we must also note that it barely applies to tenants of controlled housing in the outlying boroughs; while rent expenditures do decrease with age of head in that submarket, the decrease is very slight.

SUMMARY

Between 1950 and 1968, both rent expenditures and the incomes of renter households rose substantially. Median gross rent increased by 96 percent, from \$49 to \$96 per month; and median renter income increased by 80 percent, from \$3,264 to \$5,885. Through 1960, changes in rents and incomes proceeded at about the same pace, so that the median rent/income ratio was about the same in 1960 as in 1950. Between 1960 and 1968, however, this ratio rose from about .19 to somewhere between .20 and .21.

In 1968, a fourth of all renter households paid less than 15 percent of their incomes for rent, about half paid between 15 and 30 percent, and about a fourth paid more than 30 percent. A large proportion of those with high rent/income ratios were welfare clients whose rents are paid by the Department of Social Services. When they are excluded from the distribution, the median rent/income ratio drops to .19, and we find about 70 percent of all nonwelfare renters with rent/income ratios below .25. This still leaves some 538,000 nonwelfare households paying more than a fourth of their incomes for rent. Not all of these are low-income families, but we estimate that about 375,000 of them had annual incomes below \$5,000; about 145,000 had incomes between \$5,000 and \$10,000, and about 20,000 had incomes of \$10,000 or more.

Multiple regression analysis of the relationships between rent expenditures and incomes, household sizes, and the age, sex, and ethnic background of household heads gives greater insight into the pattern of rent expenditures than do simple cross-tabulations. We have applied this technique to four distinct submarkets for rental housing: Manhattan uncontrolled, Manhattan controlled, non-Manhattan uncontrolled, and non-Manhattan controlled. Otherwise comparable families spend substantially different amounts for housing in each of these submarkets because the

prices at which comparable housing is offered in the four submarkets differ substantially. Families choosing a particular submarket adjust both their housing budgets and the type and quality of housing they consume to fit the price structure of that market.

Within each submarket, income is the variable of greatest importance. Outside Manhattan, differences in household income account for 81 percent of the observed variance in rent/income ratios for tenants of both controlled and uncontrolled housing. In Manhattan, the corresponding figures are 62 percent for controlled housing and 48 percent for uncontrolled housing. Once the four submarkets are distinguished, inclusion of variables other than income does not add much to the explanatory power of the model in any submarket except Manhattan uncontrolled housing, where another 8 percent of the variance is explained by household characteristics other than income, primarily the ethnic background of the household head.

Of the four basic household types distinguished in our analysis, families headed by white males are the most numerous among renter households in New York City, accounting for almost 60 percent of the total. Those living in controlled housing, whether in Manhattan or elsewhere, typically have rent/income ratios that are quite low by traditional standards, tending to exceed .25 only at incomes below \$4,000. At incomes of \$7,000 or more, the typical rent/income ratio for such households is less than .20. Rent/income ratios for households headed by nonwhites and Puerto Ricans are still lower.

High rent/income ratios are in fact characteristic only of very poor households and of white households living in uncontrolled Manhattan apartments. Among the poor, many are welfare clients whose rent allowances are set independently of their allowances for other consumption goods; for these cases, a high rent/income ratio is not a sign that the family is depriving itself of food or clothing in order to pay for shelter.

The high rent/income ratios borne by white residents of uncontrolled Manhattan apartments could be avoided by these families if they moved to one of the outlying boroughs: their counterparts in uncontrolled housing outside Manhattan pay about half as much in rent. If some families choose to pay the stiff Manhattan premium, it is presumably because they consider the extra rent outlay a reasonable price to pay for the benefits they perceive in living in Manhattan.

V. RENT CONTROL AND THE DEMAND FOR HOUSING

In the preceding chapter we showed that in 1968 tenants with comparable incomes and household characteristics typically paid substantially less rent for controlled than for uncontrolled housing. This finding strongly suggests that families fortunate enough to obtain controlled housing in a suitable location were getting a bargain relative to their counterparts in uncontrolled housing. The extent of the bargain is not altogether clear, for these differences in rent outlays may have been accompanied by differences in the location, size, and intrinsic quality of the units occupied, or by differences in the level of service provided by the landlord.

In this chapter, we will identify the beneficiaries of this presumptive bargain, distinguishing the characteristics of families living in controlled housing from those of families living in uncontrolled housing. We will also estimate the magnitude of the benefits conferred on tenants of controlled housing by legal restrictions on the landlord's freedom to charge what the traffic will bear. We will then explore some of the ways in which rent control is often alleged to have distorted or altered patterns of housing consumption and rent expenditures in New York City.

WHO LIVES IN CONTROLLED HOUSING?

In 1968, about 1,267,000 households in New York City occupied housing units that were subject to rent control. About 570,000 households occupied private rental housing whose rents were not subject to any form of public regulation, although most of these were subsequently covered by the Rent Stabilization Law enacted by the City Council in May 1969. Another 230,000 lived in publicly subsidized housing whose rents or carrying charges were regulated by some agency other than the Office of Rent Control: 144,000 tenants of public housing, and 85,000 tenants of publicly aided middle-income housing, including "cooperatives" whose tenant equities were nominal.¹ Finally, there were 63,000 single persons and about 10,000 families living in SRO units—quarters that, for lack of private kitchens or baths, are not usually

¹ In most tabulations, the latter (about 47,000 units) are counted as owner-occupied housing.

described as "housing units." Many of these are nominally subject to rent control, but in practice, their rents have proven to be uncontrollable. Not all of these groups are clearly distinguished by the Housing and Vacancy Survey of 1968. In this chapter we will compare and contrast two groups: 1,267,000 households living in controlled rental housing units, and 612,000 households living in other private rental units, including about 38,000 tenants of publicly regulated and partially subsidized middle-income housing.

Household Characteristics

As indicated by the topmost bar of Fig. 19, about 67 percent of these 1,879,000 households were occupants of controlled units, and the other 33 percent were occupants of uncontrolled units. If occupancy of controlled housing were a random event for residents of New York City, roughly these same proportions should apply to any distinguishable subgroup of the City's households. Each of the remaining bars in the figure shows how a particular subgroup is divided between controlled and uncontrolled housing. Some subgroups display a greater-than-average, others a less-than-average, propensity to live in controlled housing.

When households are grouped by size, the deviations from this norm are small. One-person households and those of five to seven persons have a greater-than-average tendency to live in controlled housing, while households of intermediate size and those of eight or more persons are slightly underrepresented in the controlled sector.²

When households are grouped by sex and age of head, we find that those headed by males are underrepresented in controlled housing, and those headed by females are overrepresented. In both cases, occupancy of controlled units increases with age: 75 percent of the households headed by males over 65 years of age and 80 percent of those headed by females over 65 years of age live in controlled units.

When households are grouped by ethnic background, we find white non-Puerto Ricans, by far the largest group, underrepresented in the controlled sector. On the other hand, nearly 77 percent of all nonwhites and 89 percent of all Puerto Ricans live in controlled housing.

The last section of the figure shows that control status varies quite systematically with income. About 86 percent of all households with incomes under \$2,000 occupy controlled units, and the percentage steadily decreases as income increases. Only 34 percent of all households with incomes of \$25,000 or more live in controlled units.

Thus, greater-than-average percentages of the poor, the elderly, households headed by females, and members of unassimilated ethnic minorities live in controlled housing. The budgetary protection provided to these groups by rent control is often advanced as a major justification for the program. It is pertinent, however,

² Since our sample included only about 200 households of eight or more persons, their recorded underrepresentation in controlled housing could easily be due to sampling variability. See Appendix Table D-1 and notes thereto.

ALL RENTER HOUSEHOLDS

(Excluding occupants of
public housing and SROs)

In Controlled Housing

In Uncontrolled
Housing

SIZE OF HOUSEHOLD

Number of persons: 1
2-4
5-7
8+

SEX AND AGE OF HEAD

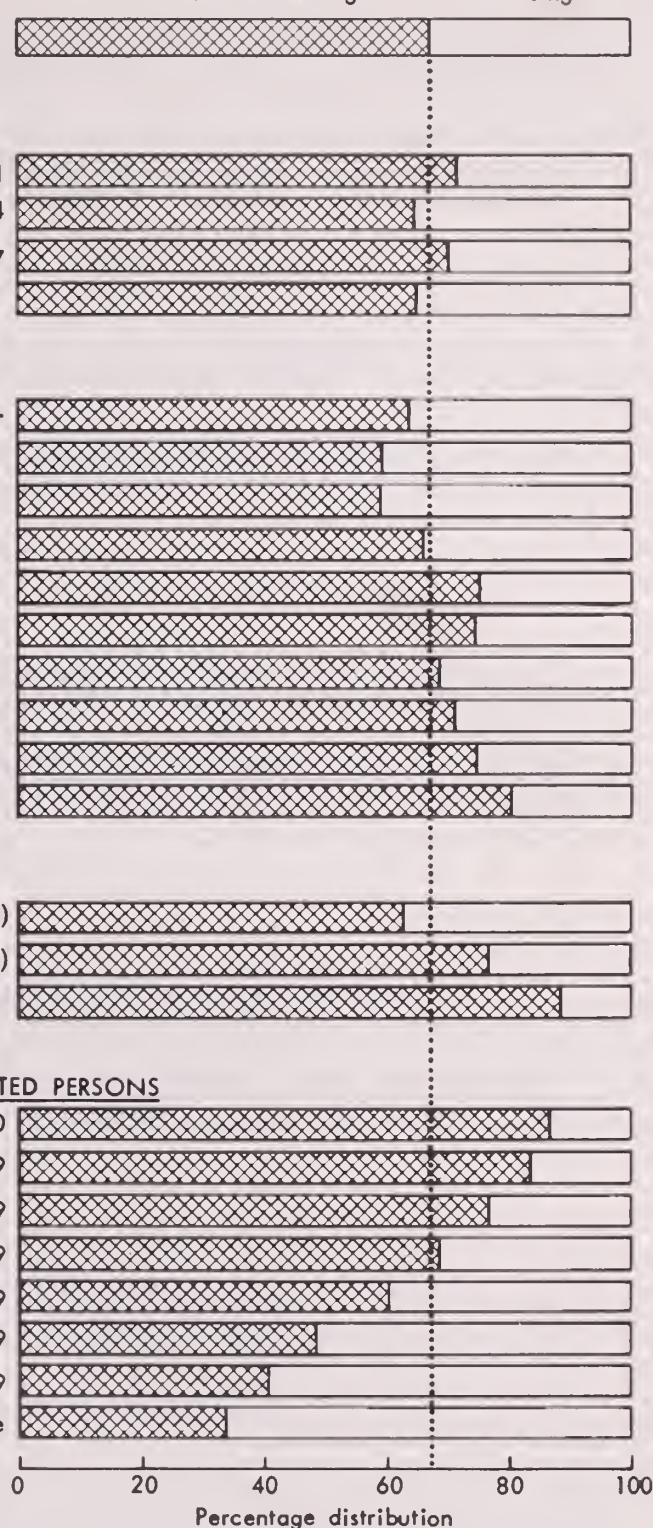
Male head -----
Under 25 yrs
25-44
45-64
65 and over
Female head -----
Under 25 yrs
25-44
45-64
65 and over

ETHNIC GROUP OF HEAD

White (non-Puerto Rican)
Non-white (non-Puerto Rican)
Puerto Rican

INCOME OF HEAD AND RELATED PERSONS

Under \$2,000
\$2,000- 3,999
4,000- 5,999
6,000- 7,999
8,000- 9,999
10,000-14,999
15,000-24,999
25,000 or more



SOURCE: Appendix Table D-1.

Fig. 19—Percentage distribution of renter households with selected characteristics, by control status of housing:
New York City, 1968

to note that these groups overlap considerably, and that the presumption of special need for budgetary protection on the part of elderly persons, households headed by females, and minority groups rests primarily on the high incidence of low incomes among such groups. Few would argue that a wealthy widow is entitled to bargain housing, or that a prosperous family should be sheltered from the full costs of its housing merely because it belongs to an ethnic minority.

We return to this point below. First, however, it is helpful to consider the distribution of rent-control benefits from another perspective: Granted that most members of these special groups are beneficiaries of the system, what fraction of the total number of beneficiaries do they constitute?

Figure 20 recasts the data to shed light on this question. We find that, among all tenants of controlled units, households headed by females constitute 33 percent of the total, those headed by persons 65 or more years of age constitute 21 percent of the total, and those headed by nonwhites or Puerto Ricans constitute 31 percent of the total. If the need of these special groups is the primary justification for public regulation of residential rents, the targeting of the program is poor indeed. Two-thirds of the beneficiaries of rent control are households headed by males, four-fifths are headed by persons under 65 years of age, and two-thirds are white non-Puerto Ricans.

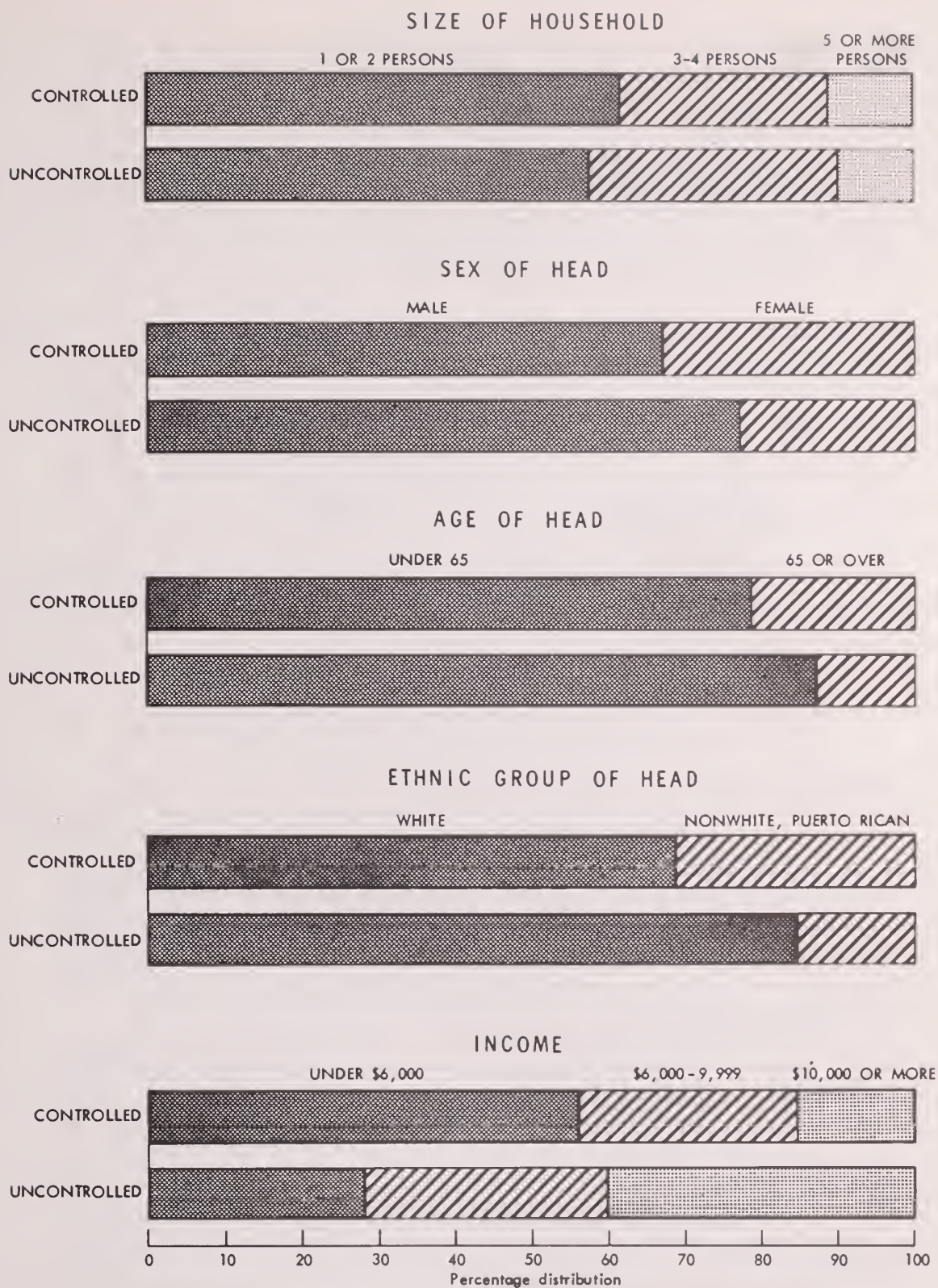
With respect to income, targeting seems more accurate. Over 56 percent of all tenants of controlled housing reported incomes under \$6,000. Still, nearly 16 percent reported incomes of \$10,000 or more. We think that the best test by far of need for budgetary protection is income, adjusted to take account of family responsibilities. We therefore undertake an analysis of the distributions of controlled and uncontrolled housing in these terms.

Reference Incomes

It is apparent from Fig. 20 that tenants of controlled housing are much more likely to have low incomes than tenants of uncontrolled housing. However, the two groups differ in their distributions by size of household; within each group, the distributions of incomes by household size are also different. We can sharpen our perception of the relative prosperity of these groups by adjusting reported incomes for differences in family size.

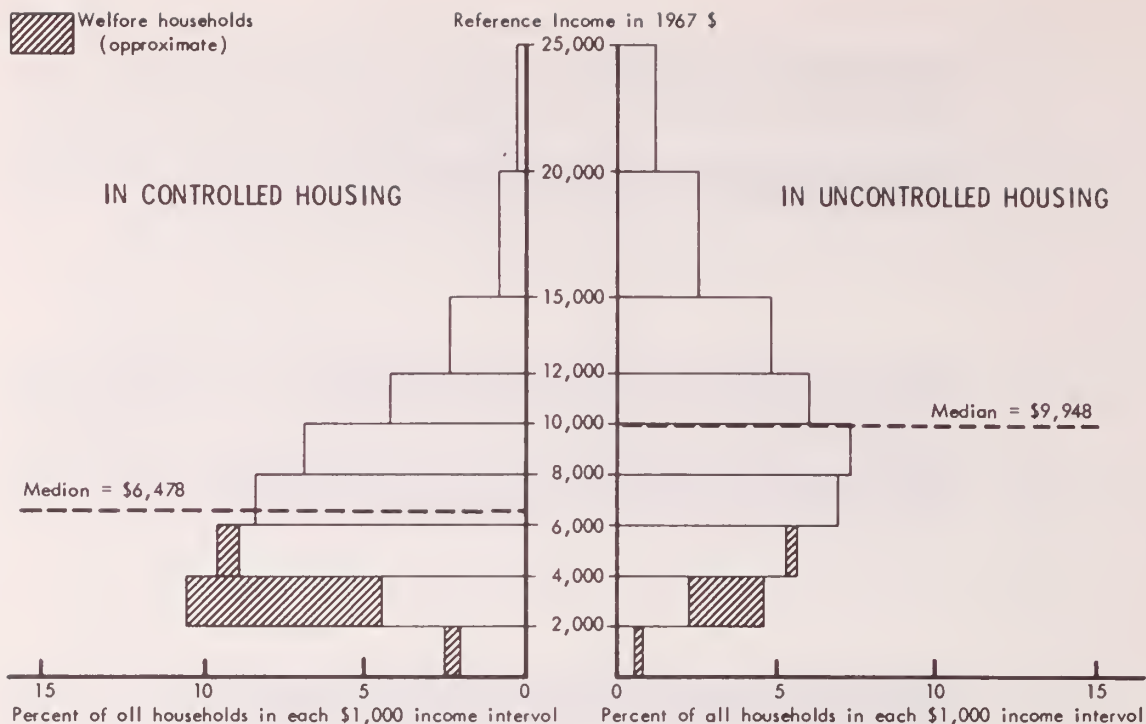
Our technique for making this adjustment is explained in Ch. III. It yields a measure of relative prosperity that we call "reference income," expressing the incomes of all households in terms of level-of-living equivalent incomes for a family of four persons. We have applied this procedure to the estimated income-by-household-size distributions of rent-paying tenants of controlled and uncontrolled housing in 1968, with the results shown in Fig. 21.

We should remind the reader that, as noted in Ch. IV, income data from the 1968 Housing and Vacancy Survey is seriously flawed by a high incidence of nonresponse. Overall response rates for tenants of controlled and uncontrolled housing were, however, about the same (57.5 and 56.3 percent, respectively); in both sectors, response rates were much lower for small households than for large ones. Nonre-



SOURCE: Appendix Table D-2.

Fig. 20—Percentage distribution of renter households in controlled and uncontrolled housing, by selected household characteristics: New York City, 1968



SOURCE: Appendix Table D-5.

Fig. 21—Percentage distribution of rent-paying households in controlled and uncontrolled housing, by reference income: New York City, 1968

spondents among households of a given size may tend to have higher or lower incomes than respondents, giving rise to a systematic bias in estimated income distributions for all households of that size class. Since response rates for households of a given size were about the same in each sector, we presume that the expanded distributions for the two sectors have at least roughly the *same* biases, and can reasonably be compared.³

It is evident from Fig. 21 that tenants of controlled housing typically have lower reference, as well as actual, incomes than tenants of uncontrolled housing. The median reference income for controlled tenants is about \$6,500; only a fourth of the "uncontrolled" tenants have incomes that low. Conversely, the median reference income of "uncontrolled" tenants is about \$10,000; no more than a fourth of the "controlled" tenants have incomes that high.

The extent to which controlled housing is occupied by the poor depends on one's definition of poverty. But by any reasonable definition, many families in rent-

³ See Appendix Table B-8 for an analysis of nonresponse rates by household size and control status.

controlled housing are prosperous enough to manage without special protection, and many families who are poor do not presently benefit from the system of rent control. According to the Community Council of Greater New York, a family of four could manage a "low-to-moderate" standard of living in 1967 on a gross income of \$6,800 to \$7,400, depending on the family's composition.⁴ About 560,000 tenants of controlled housing (45 percent of all "controlled" tenants) had reference incomes above \$7,000 in 1967. The uncontrolled sector housed some 170,000 families with reference incomes below that level, about 20 percent of all families with reference incomes below \$7,000. It is clear that rent control does not sort out the prosperous from the poor with much efficiency.

Many of the low-income families living in controlled housing are welfare clients whose rents are paid by the Department of Social Services. In these cases, the most direct beneficiary of rent control is the public treasury rather than the tenants. In May 1968, there were about 260,000 households containing welfare recipients. Although we have no direct way of ascertaining how many of these lived in controlled housing, collateral evidence suggests that the number is around 180,000.⁵ Reference incomes for welfare households cluster tightly in the range of \$2,000 to \$4,000. We have shaded the appropriate sections of Fig. 21 to show these cases. If they are excluded from the count, more than half of the nonwelfare tenants of controlled housing had reference incomes above \$7,000, and more than a third of all nonwelfare families with reference incomes under \$7,000 lived in uncontrolled housing.

Duration of Tenure

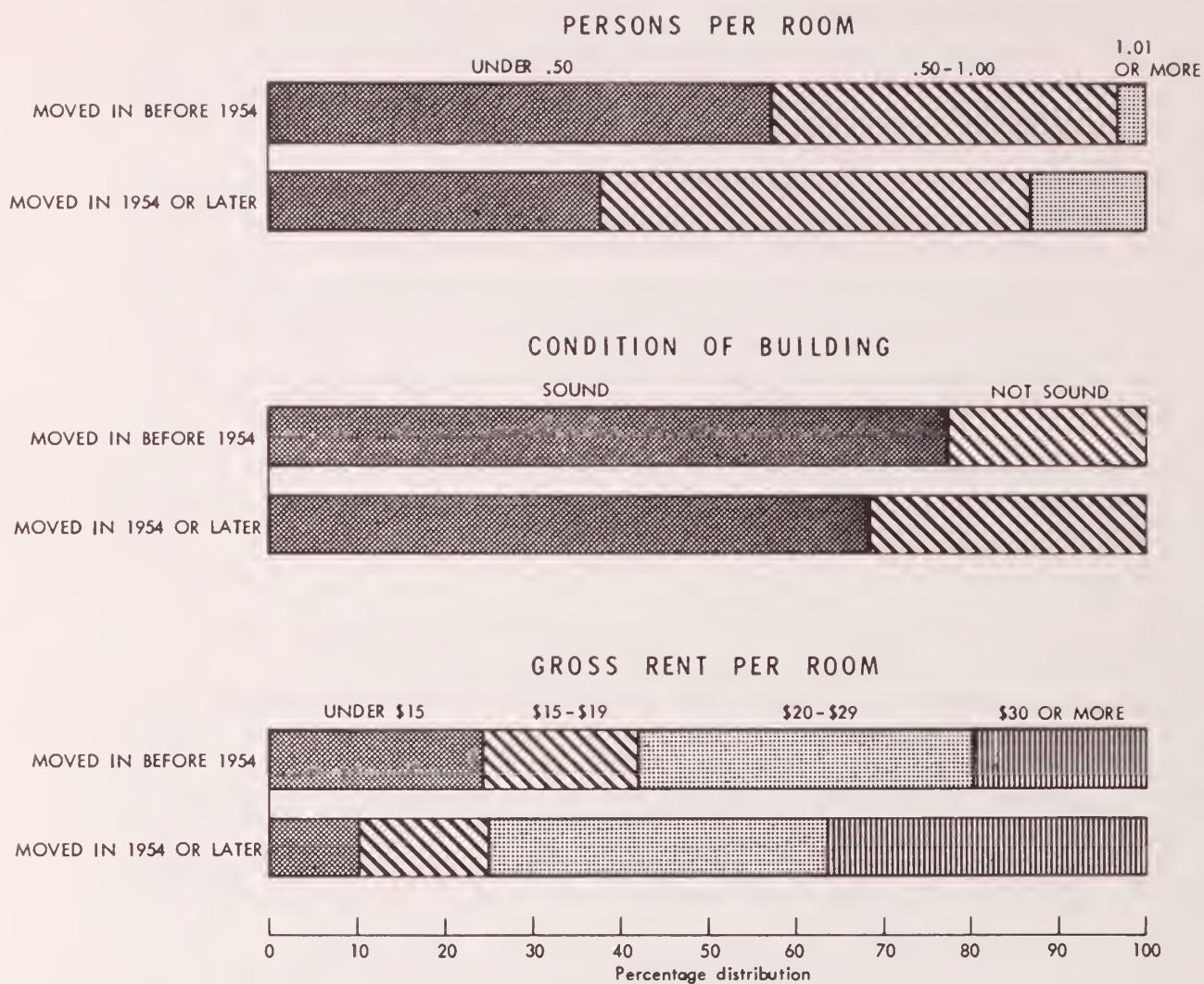
Under rent control regulations in effect until 1970, a landlord was permitted to raise the ceiling rent on an apartment by 15 percent on the occasion of a change in tenant, although such increases could not be granted more frequently than every 2 years. Thus, controlled apartments that experienced frequent turnover of tenants tended to have higher ceiling rents than otherwise similar apartments whose tenantry was stable. A priori, one would expect those families with long tenure in controlled apartments to be the greatest beneficiaries of the City's system of rent control.

Figure 22 shows that this was indeed the case in 1968. There were then about 311,000 households occupying the same controlled units they did in 1954. As compared with "controlled" tenants with less tenure, these 311,000 households occupied more space per person in buildings of better quality, and paid lower rents per room.

⁴ See Ch. VI and Appendix E.

⁵ In Ch. III, we described a Bureau of the Budget study of the incomes of welfare clients as of July 1, 1969. The same study matched clients' addresses with the addresses of buildings listed in the City's Multiple Dwelling Master file. Matching was successful for more than three-fourths of all welfare households. Most of the remainder, it is obvious, lived in one- and two-family houses.

For those whose addresses could be matched, the type of structure is a fairly reliable guide to control status. Allocating the remainder by various methods, we conclude that in mid-1969, about 216,000 welfare households lived in controlled housing; in mid-1968, the number would have been smaller—about 180,000.



SOURCE: Appendix Table D-6.

Fig. 22—Selected housing characteristics of tenants of controlled rental housing, by length of tenure: New York City, 1968

Forty-two percent of the long-term tenants paid less than \$20 per room as compared with 25 percent of the short-term tenants.

Who are these long-term tenants? A popular impression is that most are the survivors of once-larger families who have remained in their rent-controlled apartments precisely because the extent of their housing bargains increased with length of tenure. If this account is correct, we would expect to find a high incidence of one- and two-person households headed by elderly persons; since the black and Puerto Rican populations of the City were relatively much smaller in 1954 than in 1958, we might also expect to find relatively few of these minorities among the long-term tenants.

Figure 23 confirms these expectations. Over 74 percent of the long-term tenants of controlled housing are households of one or two persons; among short-term tenants, only 56 percent of the households are that small. About 44 percent of the long-term tenant households are headed by a person 65 or more years of age, as compared with 13 percent of the short-term tenant households. Nearly 87 percent of the long-term tenants, but only 62 percent of the short-term tenants, are white non-Puerto Ricans.

The income distributions of these two groups are particularly interesting. Nearly 21 percent of the long-term tenants reported incomes under \$2,000, as compared with 10 percent of the short-term tenants. These low-income tenants are mostly single elderly pensioners, more frequent among long-term than short-term tenants. The long-term tenants are relatively sparse in the \$4,000 to \$9,999 bracket, but about 16 percent of each group reported incomes of \$10,000 or more.

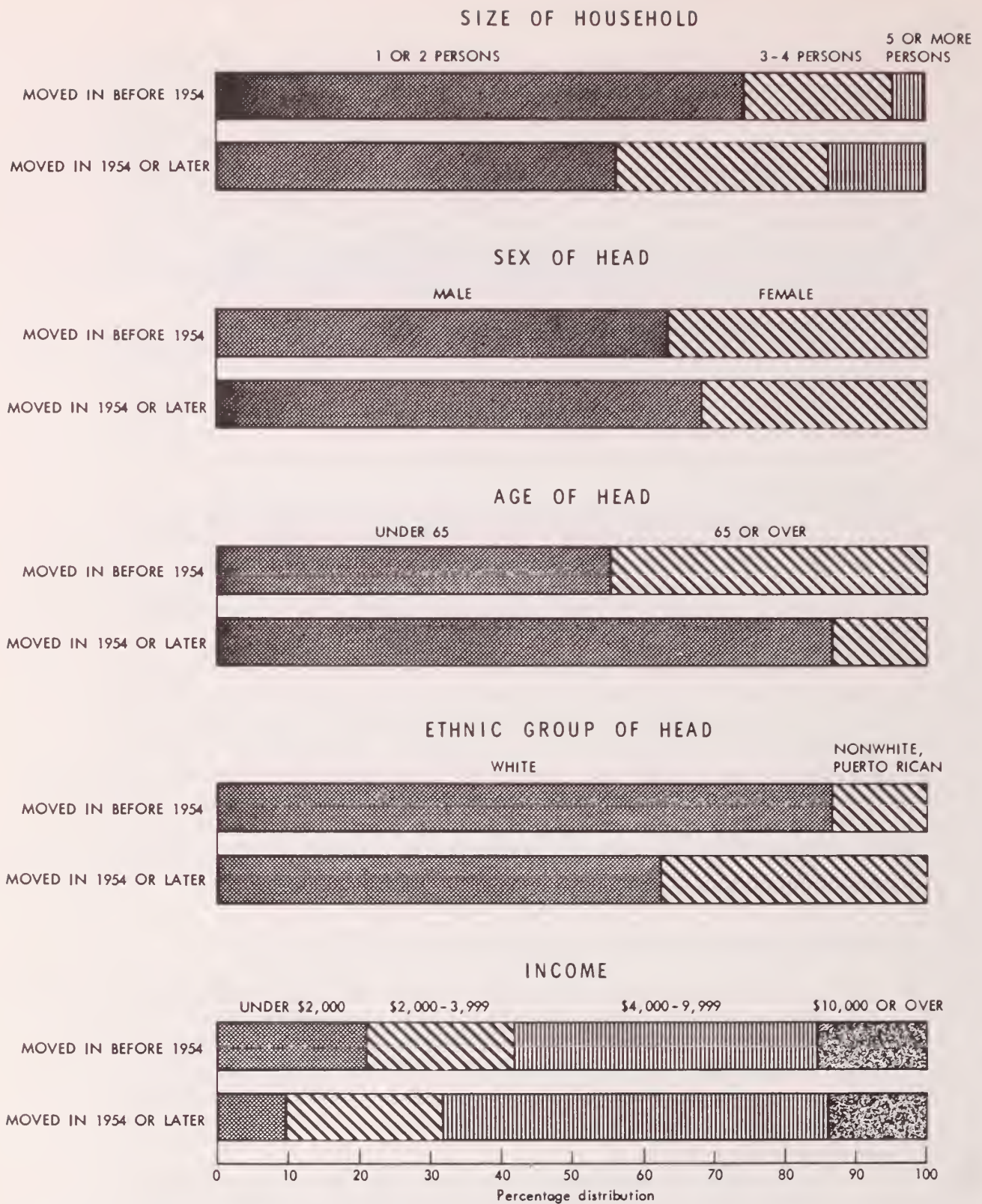
We have not calculated reference income distributions for these two groups, a step that would require special processing of the unit record file of the 1968 Housing and Vacancy Survey. But given the much smaller household sizes of the long-term tenants, we feel safe in saying that the long-term tenants are at least as well off as the short-term tenants, and include a larger proportion of families in the upper ranges of the reference income distribution.

The conclusion is hardly escapable that the existing system of rent control rewards long tenure with rent bargains without regard for the budgetary needs of the beneficiaries.

IS CONTROLLED HOUSING A BARGAIN?

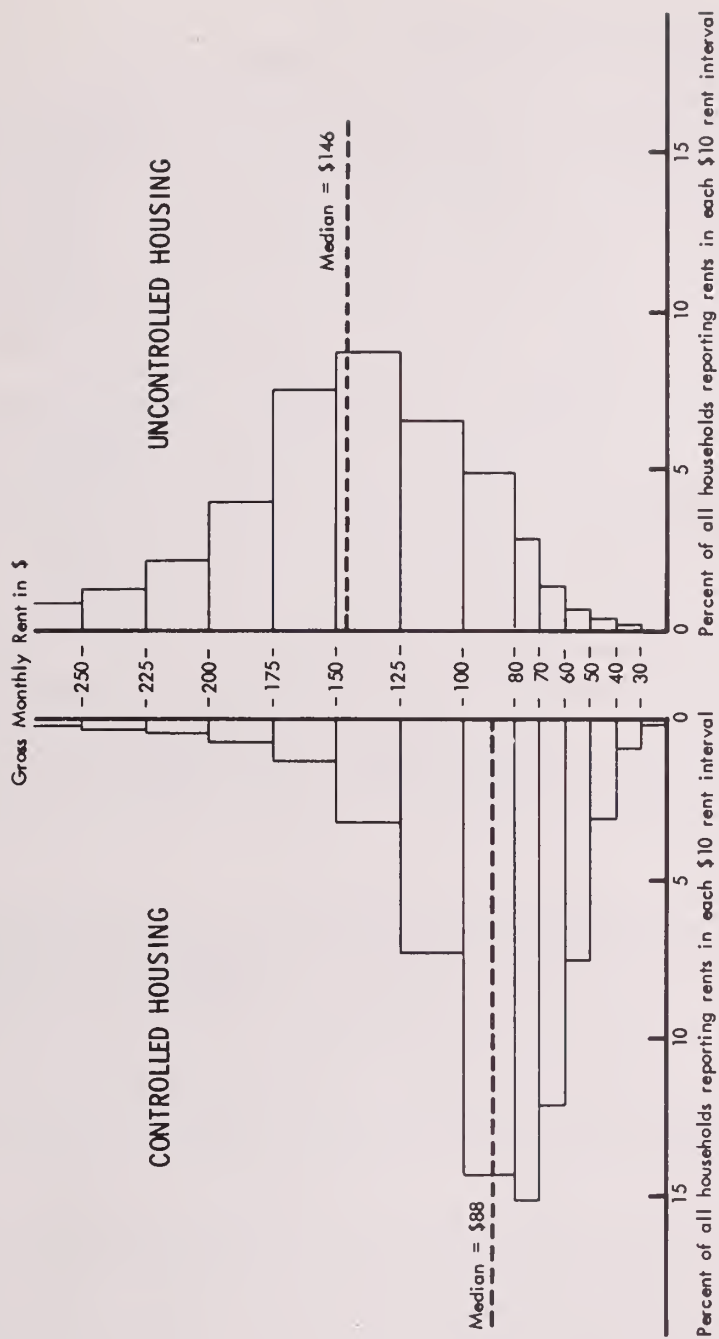
Figure 24 compares the distributions of households in controlled and uncontrolled housing by gross monthly rent paid in 1968. Rents paid by tenants of controlled housing were rather tightly clustered about their median value of \$88, while those paid by tenants of uncontrolled housing were more widely distributed, with a much higher median, \$146. Only in the range of \$80 to \$125 do the two distributions substantially overlap. Clearly, controlled housing usually rented for much less than uncontrolled housing.

Rent controls were designed to restrain landlords from raising rents to free-market levels; to the extent that controls have succeeded in this aim, it is fair to speak of controlled housing as a bargain, available to its tenants for less than others



SOURCE: Appendix Table D-7.

Fig. 23—Selected household characteristics of tenants of controlled rental housing, by length of tenure: New York City, 1968



SOURCE: Appendix Table D-8.

Fig. 24—Percentage distribution of controlled and uncontrolled housing units, by gross rent per unit: New York City, 1968

would be willing to pay. Both landlords and tenants appear to agree that most controlled housing is a bargain in this sense; that is why landlords favor and tenants resist decontrol.

Comparing Controlled and Uncontrolled Housing Units

However, a simple comparison of typical controlled and uncontrolled rents surely overstates the benefits that accrue to tenants of controlled housing. Even if controls were lifted, most of the controlled stock would continue to rent for less than most of the uncontrolled stock. For one thing, all controlled units are in buildings that predate 1947; about 75 percent are in buildings that predate 1930. Only 36 percent of all uncontrolled housing predates 1947; possibly 25 percent predates 1930.⁶ The market does not value all new housing over all old housing; but newness, particularly in multiple dwellings, generally commands a premium.

Although room sizes may differ, the median number of rooms per unit is 3.6 in both controlled and uncontrolled housing. However, controlled units are more homogeneous in size: 82 percent contain three to five rooms as compared with 74 percent of the uncontrolled units.⁷ In any case, monthly gross rents per room are clearly much lower for controlled housing, where the median value is \$25.10, than for uncontrolled housing, where the median value is \$43.50. (See Table 16.)

Interestingly enough, at any given rent per room, controlled housing seems to be in worse condition than uncontrolled housing. The data are shown in Table 17. At rents under \$15 per room, 48 percent of the controlled units and 70 percent of the uncontrolled units were in buildings classified as "sound" by the field workers of the 1968 Housing and Vacancy Survey. Even at rents of \$50 or more per room, the incidence of substandard buildings was higher in the controlled inventory. In these terms, controlled housing seems to be no bargain, but a worse buy than uncontrolled housing.

Another important variable is location; the market value of a housing unit usually reflects the amenities of its immediate neighborhood as well as its accessibility to places of work and to facilities for shopping and entertainment. We have no data that distinguish location by small neighborhoods, but it is well known that Manhattan housing commands a premium, and Queens is noted for pleasant neighborhoods (although not all its neighborhoods fit this description). These differences apparently reflect in the pattern of median uncontrolled rents per room by borough, shown in Table 18. But in each borough the median controlled rent is substantially

⁶ The Housing and Vacancy Survey of 1968 did not record years of construction prior to 1947, but most units in multiple dwellings were classified from records of the Department of Buildings by structure types that identify building age: Old-Law tenements, built before 1901; New-Law tenements, built between 1901 and 1929; and multiple dwellings built after 1929. For units in one- and two-family houses, this convenience is not available; however, since there was little residential construction in New York City between 1930 and 1946, most one- and two-family houses predating 1947 must also predate 1930.

Housing built after 1946 was not subject to rent control; uncontrolled housing predating 1946 consists of 224,000 units that had been decontrolled and were still in the inventory in 1968; 70 percent of these were in one- or two-family houses.

⁷ See Tables 20 and 21, below.

Table 16

DISTRIBUTION OF CONTROLLED AND UNCONTROLLED RENTAL HOUSING UNITS,
BY GROSS RENT PER ROOM: NEW YORK CITY, 1968

Gross Monthly Rent per Room, in Dollars	Controlled Housing		Uncontrolled Housing	
	Thousands of Units	Percent	Thousands of Units	Percent
Less than 15	158.1	13.9	9.5	1.8
15-19	173.2	15.3	22.0	4.1
20-24	232.0	20.4	44.0	8.2
25-29	205.8	18.1	46.5	8.6
30-39	210.2	18.5	104.9	19.5
40-49	72.0	6.3	120.0	22.3
50-74	54.0	4.8	107.3	19.9
75 or more	30.0	2.6	84.0	15.6
Total reporting gross rent	1,135.3	100.0	538.2	100.0
No cash rent	27.7	—	10.2	—
Gross rent not reported	103.9	—	63.2	—
Total occupied units	1,266.8	—	611.7	—
Median gross rent	\$25.10		\$43.50	
Interquartile range	15.30		32.00	
Upper limit	33.90		63.20	
Lower limit	18.60		31.20	

SOURCE: Unpublished tabulations, New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding. Medians and quartiles were estimated by linear interpolation within class intervals for units reporting gross rent.

less than the median uncontrolled rent, and controlled median rents do not vary greatly among boroughs.

Estimating Market Rents for Controlled Housing Units

It should be evident from the comparisons above that analysis of two-way cross-tabulations cannot lead to an unequivocal conclusion about the amount of benefit conferred on tenants of rent-controlled housing. We find that in each borough such tenants typically pay lower rents per room than tenants of uncontrolled housing, but city-wide they live in older buildings and at each rent level their buildings are in worse condition. Other data show that controlled units tend to be in smaller buildings than uncontrolled units, buildings less likely to have resident superintendents. Many aspects of housing quality and building service that are likely to differ between the two market sectors cannot be easily measured, and are not included in our 1968 data base.

Table 17

CONDITION OF STRUCTURE FOR CONTROLLED AND UNCONTROLLED RENTAL HOUSING
UNITS, BY GROSS RENT PER ROOM: NEW YORK CITY, 1968

Gross Monthly Rent per Room, in Dollars	Controlled Housing		Uncontrolled Housing	
	Thousands of Units	Percent "Sound"	Thousands of Units	Percent "Sound"
Under 15	157.9	48.2	9.3	69.9
15-19	173.0	58.5	22.0	75.9
20-29	436.5	70.4	90.4	79.2
30-49	281.7	85.6	224.3	95.1
50 or more	83.7	90.7	191.1	98.6
No cash rent	27.4	67.2	10.2	91.2
Gross rent not reported	102.4	73.6	63.0	90.8
Total reporting condition of structure	1,262.7	70.9	610.3	92.3
Condition not reported	4.1	—	1.4	—
Total occupied units	1,266.8	—	611.7	—

SOURCE: Unpublished tabulations, New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding.

Table 18

MEDIAN GROSS RENT PER ROOM FOR CONTROLLED AND UNCONTROLLED
RENTAL HOUSING UNITS BY BOROUGH: NEW YORK CITY, 1968

Borough	Controlled Housing		Uncontrolled Housing	
	Thousands of Units	Median Gross Rent/Room	Thousands of Units	Median Gross Rent/Room
Bronx	311.2	\$25.10	72.7	\$39.20
Brooklyn	414.8	24.30	168.5	35.70
Manhattan	386.7	26.90	145.5	over \$50
Queens	150.2	26.90	207.8	41.10
Richmond	4.0	21.80	17.2	30.00
All boroughs	1,266.8	\$25.10	611.7	\$43.50

SOURCE: Unpublished tabulations, New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding. Units reporting "no cash rent" and units not reporting gross rent are included in unit counts but excluded in computation of medians. Medians were estimated by linear interpolation within rent intervals.

The first of these problems, the inconclusiveness of two-way cross-tabulations, is partially resolvable by the use of multiple regression analysis. Taking uncontrolled units whose rents are set by the market, we can estimate the premium or discount associated with a particular physical characteristic of these units (such as location) while holding all other characteristics constant. The end-product of this analysis is a formula for estimating the market value of any housing unit in the City, given its physical characteristics. This formula can then be applied to rent-controlled units whose physical characteristics are known, to estimate what their rents would be in the absence of rent control.

Because there are so many unmeasured ways in which housing units can differ, the estimates of market values obtained by this procedure will not be very reliable for individual units. If, however, they do not have a systematic bias, they will serve quite well to estimate the aggregate market value for a large number of controlled units. The difficulty is that we have no direct statistical test of the biases that might result from applying an estimating formula based on data for uncontrolled housing to controlled housing, a distinct class that only partially overlaps uncontrolled housing with respect to physical characteristics. (There would be no problem if the units under rent control had been a random selection from among all rental units on the market in 1968.)

In other words, while we have enough confidence in our findings to present them for the reader's consideration, that confidence is qualified by our inability to apply critical tests.

Our analysis of the factors determining the market rents (including tenant-paid utilities) of housing units in New York City is based on a sample of 6,747 units in multiple dwellings and 2,403 units in one- and two-family houses. These observations were drawn from the unit-record file of the 1968 Housing and Vacancy Survey, including only those uncontrolled units that were privately owned, occupied at the time of the survey by tenants paying cash rent, and for which all pertinent building and unit characteristics were recorded. Of the building and unit characteristics recorded by the survey, the following were found to have systematic relationships to market rent:

Multiple Dwellings

Borough of location
Age of structure
Condition of structure
Number of units in structure
Number of rooms in unit
Furnished/unfurnished
Story of unit
Elevator/no elevator

One- and Two-Family Houses

Borough of location
Age of structure
Condition of structure
Resident/nonresident owner
Number of rooms in unit
Furnished/unfurnished

A full technical description of the data base and the regression models is presented in Appendix D. For present purposes, it is enough to note that these

variables account for 51 percent of the variance in rents for units in multiple dwellings and 42 percent of the variance in rents of units in one- and two-family houses. The signs and magnitudes of the regression coefficients are plausible in the light of ordinary experience—e.g., we find a large premium for Manhattan location, with Queens in second place; sound structures are valued higher than deteriorated or dilapidated ones; apartments in large or new buildings are more expensive than apartments in small or old buildings; upper floors command a premium only if there is an elevator; large apartments and houses cost more than small ones.

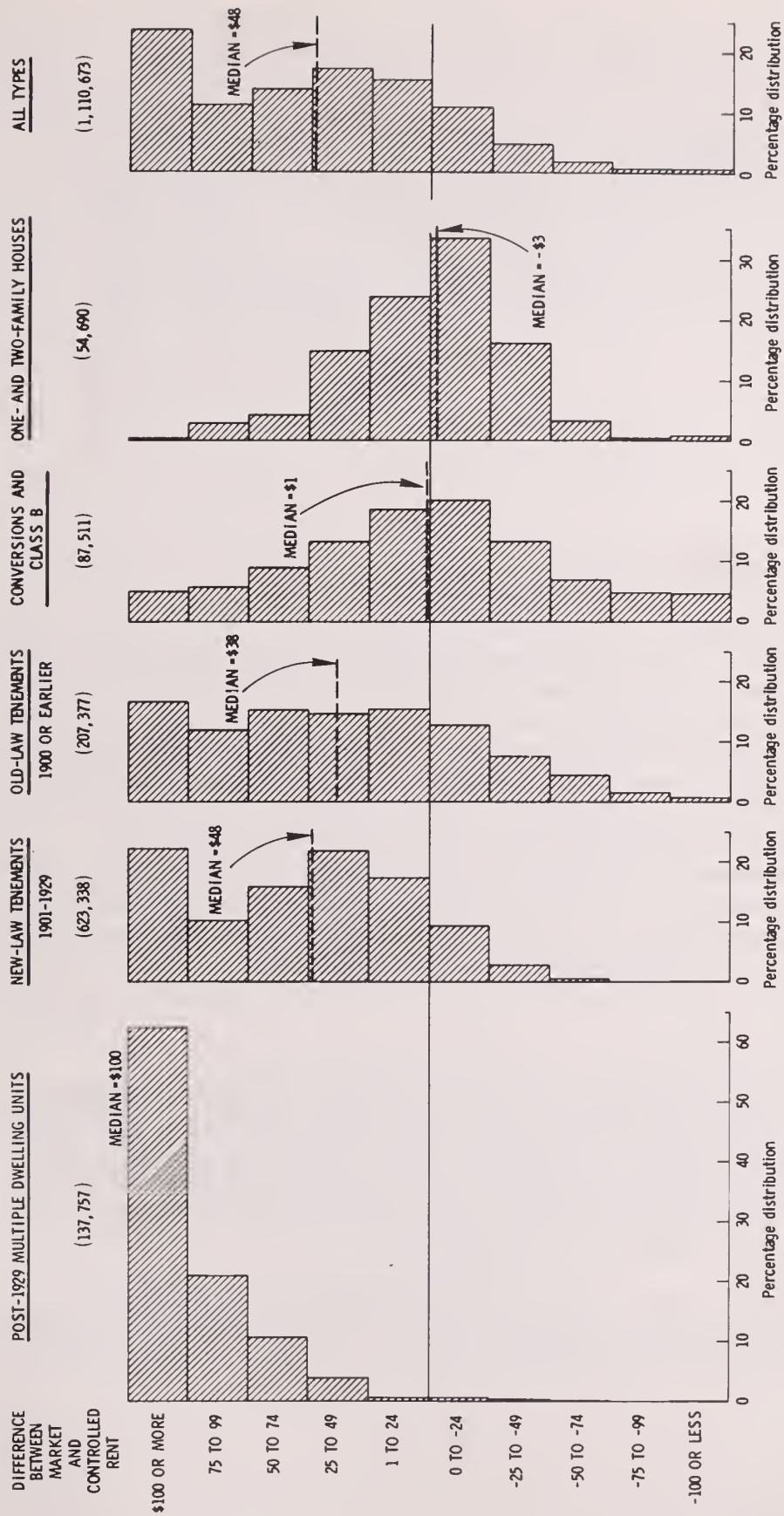
The market rent estimating formulas were applied to the 1968 Housing and Vacancy Survey's sample of controlled housing units; sample units were excluded from the test if they were unoccupied or if the unit record failed to report either controlled gross rent or any of the physical characteristics needed to employ the formulas. Those with complete records represented about 1,056,000 of the City's 1,179,000 occupied controlled units in multiple dwellings and 54,700 of the City's 63,000 occupied controlled units in one- and two-family houses, excluding in both cases units where tenants paid no cash rent. For each unit, the estimated market rent was compared with the reported controlled rent, with the results shown in Fig. 25 by type of structure.

In about 81 percent of the cases, the estimated market rent was greater than the reported (controlled) rent; in about 19 percent of the cases, the reported rent was larger. With rare and transient exceptions, one would not expect to find tenants paying higher-than-market rents. However, our market rent estimating formulas are far from infallible; we take these cases to be instances in which the estimated market rent was too low. If there were in fact no systematic differences between market rents and controlled rents, one would expect half our estimates of market rent to be greater than the reported rent and half to be smaller. The differences shown in Fig. 25 would then be normally distributed about mean zero.

Interestingly enough, this was almost precisely the case for units in "Conversions and Class B" structures and for units in one- and two-family houses. Over 80 percent of the first group are units in one- and two-family houses converted to apartments, perhaps the least desirable housing in the City.⁸ The units in the second group are the residual of a much larger class of pre-1947 houses, units that have remained under rent control because of continuous occupancy by a pre-1953 tenant.

For units in all other types of structure, estimated market rents tended to exceed reported rents; for units in post-1929 multiple dwellings, those most resembling the uncontrolled stock in age, estimated market rents exceeded reported rents in more than 98 percent of the cases, with a median difference of more than \$100 per month. Overall, the median difference between estimated market rents and reported (controlled) rents was \$48 per month and the arithmetic mean was \$54. In other words, our analysis supports the general belief that in 1968 controlled housing was a substantial bargain for its tenants.

⁸ The structural condition of these converted one- and two-family dwellings was better than that of Old-Law tenements, but living arrangements must have been extremely cramped and makeshift; 23 percent were in buildings that had been divided into ten or more apartments and nearly 60 percent had three or fewer rooms.



SOURCE: Appendix Table D-9.

Fig. 25—Percentage distribution of controlled housing units by estimated difference between market rent and controlled rent, by type of structure: New York City, 1968

Generalizing these findings to include all 1,239,000 privately owned controlled rental units occupied by tenants paying cash rent, we estimate that the aggregate annual market rent of controlled housing in New York City was about \$2,209 million. The reported rents on these same units amounted, on an annual basis, to \$1,402 million.⁹ In other words, tenants of rent-controlled apartments benefited to the tune of about \$807 million per year, roughly \$650 per family.

As we have noted, many aspects of housing quality, building service, and neighborhood that are likely to differ between controlled and uncontrolled housing cannot easily be measured and are not included in our market rent estimating formulas. We are inclined to think that the omission of these factors introduces a bias in our analysis, leading to an overestimate of the market value of controlled housing and therefore of the rent-savings enjoyed by its tenants. But even a very generous allowance for bias would not reverse the conclusion that in 1968 controlled housing in New York City was priced well under its market value. If this were not so, rent control would have no function.

RENT CONTROL AND HOUSING CHOICES

When consumers are offered a commodity at a bargain price, they usually consume more than they would otherwise. In the case of controlled housing, however, the ability of the City's residents to respond in this way is limited by the scarcity of the commodity in question. Controlled housing is hard to find, and those who find it must take what they can get. They are willing to settle for less than they would like precisely because, despite inconveniences, rents on controlled housing are attractively low as compared with uncontrolled housing and, once in occupancy, they are protected from rent increases.

In this section, we will try to show how rent control has affected the pattern of housing consumption with respect to location, size of units, and housing quality. In the next section, we will show how it has affected the housing expenditures of the two-thirds of the City's renter families who live in controlled housing.

Location of Residence

Our regression analysis of the factors influencing the rental values of uncontrolled housing in New York City, described briefly in the preceding section and documented in greater detail in Appendix D, indicates that the rents of otherwise comparable housing units located in different boroughs vary considerably. Table 19 lists the typical premiums for units in multiple dwellings and for units in one- and two-family houses in each of the five boroughs.

⁹ Alternative methods of expanding the sample data yield slightly different results. Our best estimate of annual gross rent expenditures in 1968 by tenants of controlled housing is \$1,408 million. See Appendix D, "Estimating Market Rents for Controlled Housing."

Table 19
MONTHLY RENTAL PREMIUMS FOR COMPARABLE HOUSING UNITS
IN FIVE BOROUGHES: NEW YORK CITY, 1968

Type of Structure	Amount of Premium by Location of Structure				
	Manhattan	Queens	Brooklyn	Bronx	Richmond
Multiple dwelling	\$109.41	\$23.14	\$12.83	\$9.27	\$0.00
1- or 2-family house	153.22	18.79	13.39	7.71	0.00

SOURCE: Analysis by NYCRI of data from the New York City Housing and Vacancy Survey of 1968. See Appendix D for method of computation.

These are the estimated rental premiums attached to each location by multiple regressions in which other differences among housing units are taken into account. For a particular housing unit, the locational premium would be added to estimates of the rental values associated with its size, condition, etc. Thus, an apartment that would rent for \$X per month if located in Richmond would typically rent for $\$(X + 9.27)$ if located in the Bronx and for $\$(X + 23.14)$ if located in Queens.

In the market's opinion, the big difference in location was that between Manhattan and the outlying boroughs. A Manhattan apartment typically rented for about \$86 more than a comparable apartment in Queens, \$97 to \$100 more than a comparable apartment in Brooklyn or the Bronx, and \$109 more than a comparable apartment in Richmond. Although there were only about 3,300 rental units in one- and two-family houses in Manhattan, the locational premium for those was even greater than that for apartments.

The rentals of controlled housing typically do not reflect these locational premiums. This can be seen from Table 18, above; the median gross rent per room for controlled housing in Manhattan is identical with that of Queens and only slightly above those of the Bronx and Brooklyn. To be sure, that table does not standardize on other factors that influence rental values, and controlled Manhattan apartments tend to be both older and in worse condition than those of the other boroughs.

These and other differences are taken into account in our estimates of the market rental values of controlled housing, discussed in the preceding section. The differences between these estimated market rents and reported rents for controlled housing are shown in Fig. 26, by location. Like Table 18, it indicates that controlled housing in Manhattan is typically greatly underpriced by market standards, much more than controlled housing in the other boroughs. The median difference between market and controlled rents in Manhattan is just over \$100, as compared with \$53 in Queens and \$27 to \$36 in Brooklyn and the Bronx.

In 1968, there were 387,000 occupied controlled housing units in Manhattan. Our analysis indicates that about 90 percent of these were rented for less than their market value, and that the aggregate annual difference amounts to more than \$400

million—about half the City-wide total. Thus, one of the critical impacts of rent control has been to subsidize Manhattan residence for nearly 350,000 families at an average cost of \$1,200 per year per family. The cost is borne in part by property owners who receive less rent than they otherwise would, and in part by the City, whose tax revenues are thereby diminished by about \$100 million annually.¹⁰

There is, of course, a reasonable question whether these 350,000 units could in fact be marketed at the rents we have estimated for them. If the market were restricted to the tenants now occupying them, they probably could not, although the 1968 tenants of these units could pay an additional \$340 million in rent without exceeding the expenditures of similar families living in uncontrolled Manhattan housing.¹¹ But if the market were open to all, and rents were not restricted by public regulation, we think it very likely that the rents of these units would rise in a few years by the full \$400 million.

Many families now living in Manhattan's controlled housing, if deprived of their bargains, would seek housing elsewhere in the City. Others, willing if need be to pay the full market premium for Manhattan housing, would stay. The vacancies would be filled by families now living elsewhere in the City who agree that the benefits of a Manhattan location are worth the premium of \$86 per month over Queens, \$97 to \$100 over the Bronx or Brooklyn. The general consequence would almost certainly be a reduction in the number of Manhattan residents who are retired or who work in other boroughs, and an increase in the number who are employed in Manhattan. Low-income families would tend to move out, and middle-income families would tend to move in once vacancies were available at higher rents.

We leave it to the reader to decide whether or not this system of housing subsidies serves a public purpose that justifies its public and private costs. Our point is simply that, under rent control, Manhattan housing is a superlative bargain to the tenant in comparison with controlled housing in the Bronx and Brooklyn, and a substantial bargain in comparison with controlled housing in Queens; and that the availability of this bargain, constricted though it is by the limited supply of controlled housing in Manhattan, significantly influences the locational choices of the City's residents.

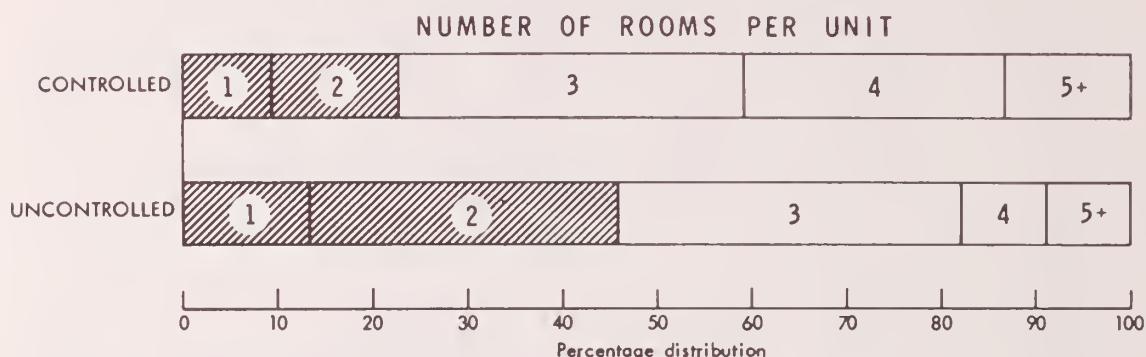
Size of Apartment

It is often argued that one consequence of rent control is a serious misallocation of space, inasmuch as tenants of controlled housing are under less pressure than they might otherwise be to economize on space. Indeed, those with long tenure in a controlled apartment whose families have shrunk in size might find themselves, if they moved, paying more for a smaller apartment of no better quality than their present quarters.

¹⁰ This calculation assumes that the assessed values of real property reflect rental revenues and that the effective real estate tax rate on rental revenues is 25 percent. This was roughly the case in 1968 for the City as a whole, when the City's tax revenues from renter-occupied residential property were about \$600 million and rental revenues were \$2.6 billion.

¹¹ See below, "Some Effects of Rent Control on Housing Expenditures"

Evidence that seems to support this argument is presented in Fig. 27. Of all one-person households in controlled housing in 1968, nearly 75 percent occupied units of three or more rooms. Of those in uncontrolled housing, only 52 percent occupied three or more rooms—despite the fact that the median income of the latter group (\$6,600) was much higher than the median income of the former group (\$3,900).



SOURCES: Tables 20 and 21.

Fig. 27—Percentage distribution of one-person households in controlled and uncontrolled housing, by number of rooms per unit: New York City, 1968

The case for a general misallocation of space within the controlled sector, however, is less clear-cut than this illustration suggests. There were 369,800 one-person households living in controlled housing, and the inventory of controlled housing contained only 133,400 units of one or two rooms. Necessarily, at least 64 percent of these one-person households would have to occupy units of three or more rooms if they were to occupy controlled housing at all. In the uncontrolled sector, there were 144,200 one-person households and 93,500 units of one or two rooms, enough to accommodate all but 35 percent of the one-person households.

Our point is simply that any judgments about the degree of space-misallocation due to rent control must take into account two constraints on this allocation: the existing size-distribution of households and the existing size-distribution of housing units. In the short run, these are fixed; in the long run, there is reason to believe that the pattern of household formation is influenced by the availability and price of housing space, and that the supply of housing units of various sizes adapts to the pattern of market demand. The latter adaptation is easier in the uncontrolled sector, where new construction, mergers and conversions, and demolitions all can operate to increase or decrease the supply of apartments of a particular size. In the con-

trolled sector, all of which predates 1947, new construction is obviously not possible, and conversions or mergers generally result in decontrol.

We lack the data to model these long-run processes of mutual adjustment between household sizes and housing-unit sizes. However, we can crudely assess the short-run performance of the controlled market in allocating space by comparing it with the uncontrolled market's performance in this respect. To do this, we must treat the controlled and uncontrolled sectors as noncompeting markets in each of which a given set of households must be distributed among a given set of housing units. We must also choose a standard for the best possible allocation of space.

Tables 20 and 21 show the 1968 allocations of space by household size in controlled and uncontrolled housing, respectively. Note that the median size of units occupied by one- and two-person households is larger in the controlled sector; about the same for three-person households in each sector; and for households of four or more persons, consistently larger in the uncontrolled sector. Note also that with the exception of one-room units, some housing units of each size are occupied by some households of each size; this is true in both sectors. Comparing the marginal totals (households by size, housing units by size) it is obviously not possible in either sector to allocate space so that there is a one-to-one correspondence between household size and unit size. In neither sector, however, is the correspondence as close as it could be—a result that should not be surprising, given the variations in income and

Table 20

NUMBER OF HOUSEHOLDS BY SIZE OF HOUSING UNIT, BY SIZE OF HOUSEHOLD:
CONTROLLED RENTAL HOUSING IN NEW YORK CITY, 1968

Number of Rooms per Unit	Thousands of Households by Number of Persons per Household						Total
	1	2	3	4	5	6+	
1	28.0	4.2	0.6	0.0	0.0	0.1	32.9
2	66.3	29.0	3.3	1.1	0.6	0.1	100.5
3	175.1	189.2	56.9	22.6	6.5	2.1	452.5
4	71.8	127.8	83.3	68.8	34.4	18.0	404.1
5	21.0	44.2	35.9	36.1	26.0	22.9	186.1
6 or more	7.7	17.2	18.7	17.3	11.7	18.3	90.7
Total	369.8	411.5	198.9	145.9	79.1	61.4	1,266.8
Median size of unit	3.02	3.41	3.96	4.26	4.44	4.96	3.62
Interquartile range	1.14	1.30	1.34	1.28	1.32	(a)	1.49
Upper limit	3.61	4.17	4.64	4.97	5.19	(a)	4.40
Lower limit	2.47	2.87	3.30	3.69	3.87	4.23	2.91

SOURCE: Unpublished tabulations, New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding. Medians and quartiles were estimated by linear interpolation within class intervals, assuming a continuous distribution with the whole number of rooms as the midpoint of the class interval.

^a Upper limit is greater than 5.50 and interquartile range is greater than 1.27. Because of open-ended class interval, exact values cannot be ascertained.

Table 21

NUMBER OF HOUSEHOLDS BY SIZE OF HOUSING UNIT, BY SIZE OF HOUSEHOLD:
UNCONTROLLED RENTAL HOUSING IN NEW YORK CITY, 1968

Number of Rooms per Unit	Thousands of Households by Number of Persons per Household						
	1	2	3	4	5	6 +	Total
1	20.0	4.0	0.3	0.0	0.0	0.0	24.3
2	48.5	16.9	2.7	0.8	0.2	(a)	69.2
3	54.2	109.3	29.9	6.7	1.4	0.6	202.1
4	13.7	49.6	48.8	35.8	9.8	3.5	161.3
5	4.9	18.7	19.5	23.7	11.4	9.7	88.0
6 or more	2.8	10.1	13.1	16.5	11.7	12.6	66.8
Total	144.2	208.7	114.4	83.5	34.5	26.5	611.7
Median size of unit	2.57	3.26	4.00	4.46	5.03	5.44	3.56
Interquartile range	1.40	1.23	1.35	1.45	(b)	(c)	1.73
Upper limit	3.23	4.01	4.71	5.32	(b)	(c)	4.52
Lower limit	1.83	2.78	3.36	3.87	4.21	4.76	2.79

SOURCE: Unpublished tabulations, New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding. Medians and quartiles were estimated by linear interpolation within class intervals, assuming a continuous distribution with the whole number of rooms as the midpoint of the class interval.

^a Less than 100.

^b Upper limit is greater than 5.50 and interquartile range is greater than 1.29. Because of open-ended class interval, exact values cannot be ascertained.

^c Upper limit is greater than 5.50 and interquartile range is greater than .74. Because of open-ended class interval, exact values cannot be ascertained.

(presumably) in tastes among the households of a given size and given the variations in location and quality among housing units of a given size.

Suppose, however, that we were to rearrange the households within each sector so that the largest units were assigned to the largest families, with any surplus units of the largest size-class allocated to the next largest households, etc. The deviation of existing arrangements from this "best" allocation can be measured by *the number of households that would have to move* in order to attain the desired space-allocation.

Table 22 shows the results of such a reallocation.¹² To achieve it, about 495,200 tenants of controlled units and 220,900 tenants of uncontrolled units would have to move from their present quarters into units more nearly appropriate to their household sizes. By this measure, there is very little difference between sectors in the degree to which space is "misallocated": 39 percent of "controlled" tenants would have to move as compared with 36 percent of "uncontrolled" tenants.

In both sectors, a greater proportion of large households than of small households would have to move; for households of five or more persons, the moves

¹² As a matter of computational convenience, we exclude as a housing resource the small number of available vacant units in each sector: 13,400 in the controlled sector, 7,500 in the uncontrolled sector.

Table 22

NUMBER OF HOUSEHOLDS BY SIZE OF HOUSING UNIT, BY SIZE OF HOUSEHOLD
AFTER HYPOTHETICAL REALLOCATION OF SPACE: CONTROLLED AND
UNCONTROLLED RENTAL HOUSING IN NEW YORK CITY, 1968

Item	Thousands of Households by Number of Persons per Household						
	1	2	3	4	5	6+	Total
<i>Number of rooms per unit</i>	In Controlled Housing						
1	32.9						32.9
2	100.5						100.5
3	236.4	215.9					452.5
4		195.6	198.9	9.6			404.1
5				136.3	49.8		186.1
6 or more					29.3	61.4	90.7
Total	369.8	411.5	198.9	145.9	79.1	61.4	1,266.8
Total moves required	100.4	94.5	115.6	100.2	41.4	43.1	495.2
Percent moved	27.1	23.0	58.1	68.7	52.3	70.2	39.1
<i>Number of rooms per unit</i>	In Uncontrolled Housing						
1	24.3						24.3
2	69.2						69.2
3	50.6	151.5					202.1
4		57.2	104.1				161.3
5			10.3	77.7			88.0
6 or more				5.8	34.5	26.5	66.8
Total	144.2	208.7	114.4	83.5	34.5	26.5	611.7
Total moves required	25.1	49.8	55.2	54.0	22.8	13.8	220.9
Percent moved	17.4	23.9	48.3	64.7	66.1	52.1	36.1

SOURCE: Computations by NYCRI from data in Tables 20 and 21.

NOTE: Distributions may not add exactly to totals because of rounding. See text for explanation of procedure for reallocating households among housing units.

would invariably be into larger quarters. In both sectors, nearly all four-person households could be accommodated in five-room units, an improvement for most such families; nearly all three-person households could be accommodated in four-room units, but many would be moving from larger quarters. Two-person households would be divided between three- and four-room units, some moving up and some moving down.

Under this scheme for reallocating housing space, one-person households get whatever is left when larger households have all been accommodated. All their moves are thus from larger to smaller quarters. As we noted earlier, however, the distribution of housing unit sizes is such that 64 percent of those in controlled housing and 35 percent of those in uncontrolled housing would end up in units of three rooms, with the rest in units of one or two rooms.

An alternative comparative measure of space-misallocation in the two sectors is the average change in apartment size experienced by all families as a result of the reallocation procedure described above. This was computed by assigning to each household a weight equal to the absolute difference between the number of rooms occupied before reallocation and the number of rooms occupied after reallocation; these weights were then summed and divided by the total number of households.¹³

We found that the average change in apartment size implied by the reallocations shown in Table 22 was .580 room for tenants of controlled housing and .558 for tenants of uncontrolled housing. Thus, by either measure of space-misallocation, number of moves or average change in apartment size, the two sectors differ very little.

This exercise was conducted under highly restrictive assumptions, and any conclusions from it must be correspondingly qualified. The results, however, suggest that space-allocation in the controlled sector is as nearly like space-allocation in the uncontrolled sector as the immediate physical constraints of each case permit.¹⁴

Quality of Housing

Residents of New York City who choose to live in controlled housing greatly restrict themselves with respect to the quality of the housing they occupy. There are several reasons why this is so. One is simply that no housing built after 1946 is subject to rent control.¹⁵ Except for 62,000 units in one- or two-family houses, controlled units are found only in multiple dwellings, and virtually all of these

¹³ Nonmovers were assigned weights of zero; units of six or more rooms were assumed to have six rooms.

¹⁴ Even merging the two sectors makes surprisingly little difference in the amount of movement needed to accomplish the desired space-allocation. When we reallocate households across sectors as well as within them, 39 percent of all households are required to move and the average change in apartment size is .590 room. The resulting reallocation is slightly "better" in the sense that there is a closer approach to a one-to-one correspondence between household size and apartment size.

¹⁵ Post-1946 multiple dwellings were subjected to a milder form of control by the Rent Stabilization Law passed by the City Council in May 1969. The effects of this law on the housing market cannot be fully appreciated until it has been in operation for some time.

buildings were constructed prior to 1943; 56 percent are in New-Law tenements, built between 1901 and 1929; 19 percent are in Old-Law tenements, built prior to 1901.

Secondly, the fact that rents on these units are fixed by law and administrative regulation means that families in search of a particularly desirable unit have no effective means of competing for its possession. They cannot, by offering a higher rent, legally displace the existing tenant when his lease expires nor can they outbid other interested parties. They can only hope to be the first in line when a desirable vacancy occurs. There are, no doubt, many instances in which eager prospects pay illegal "key money" or bribes to building superintendents in order to gain possession of a controlled apartment after it has been vacated.

Once in a residence, the tenant of a rent-controlled apartment can negotiate with his landlord concerning the maintenance, repair, and building-service aspects of housing quality. This negotiation, in fact, is the principal point of friction between landlords and tenants. Under the rent-control law, tenants are in effect guaranteed the level of maintenance and building services provided by the landlord in 1943.

If the landlord unilaterally decreases services, or permits housing code violations to go uncorrected, the tenant can appeal to the Office of Rent Control for a compensating rent reduction. The landlord, on the other hand, is permitted to pass along direct labor-cost increases for building services. He may claim rent increases according to a schedule prepared by the Office of Rent Control for increased building services or for new equipment such as refrigerators, but only with the tenant's consent. Rent increases to compensate for capital improvements to the building as a whole—new heating systems, etc.—require the consent of one-half to three-fourths of the building's tenants, depending on the type of improvement. Under certain circumstances, the owner may rehabilitate his building without tenant consent and claim rent increases according to a schedule set by the Office of Rent Control.

These provisions of the rent-control law are virtually unavoidable if the concept of a ceiling rent is to have meaning as a fixed price for a fixed bundle of housing services. Without them, most landlords would respond to the imposition of rent ceilings by reducing the flow of services until the market value of the housing being supplied was equal to the ceiling rent received. What has emerged, however, from a series of measures designed to block landlords from this not unnatural move is a system of mutual vetoes on changes in housing quality that surely inhibits the tenant from consuming—and paying for—the quality of housing he would choose in a less-constrained market.

The difficulties lie partly in the provisions of the law and partly in habits of thought. Both landlords and tenants often seem to believe that controlled rents are fixed by law more rigidly than is actually the case. Tenants are quick to notice deterioration in maintenance and building services, which they interpret as a failure of the landlord to live up to his moral and legal obligations; they are less directly exposed to the landlord's problem of rising costs for which he sees no hope of compensation. The viewpoints are mutually reinforcing.

The point should not be overstated. There is evidence that a good deal of bargaining goes on outside the purview of the law. Comparing contract rents re-

ported in 1960 by tenants of controlled units with the ceiling rents registered for these same units in the records of the Office of Rent Control, Kristof found that one-fourth of all such tenants reported contract rents in excess of registered rents, and that the median difference for these cases was \$13 per month.¹⁶

There is one other way around the maintenance impasse, the "do-it-yourself" route. Of limited applicability to building systems and the maintenance of public areas of a building, it can become the tenant's principal means of upgrading the interior of his apartment. Many tenants of controlled housing probably find it more effective, if less soul-satisfying, than berating a negligent landlord or building superintendent. We have, unfortunately, no means of estimating the extent to which maintenance and services that were once the acknowledged responsibility of the landlord have been assumed by the tenant as part of the price he must pay for controlled housing whose nominal rent is below its market value.

The reverse of "do-it-yourself" quality improvement is the tenant-caused housing code violation. Under the rent-control law in effect in 1968, many such violations are grounds for rent reduction, in the extreme to one dollar per month. In 1968, some 350,000 applications for rent reductions were filed, about 85 percent of which originated in tenant complaints. In 88,000 cases the application was disallowed and in 204,000 cases the violation was corrected prior to rent reduction; however, in 57,000 cases, reductions averaging \$11 per month were granted.

Landlords argue, and building inspectors sometimes confirm, that violations are sometimes deliberately created by tenants who believe that they stand to benefit, on balance, from the ensuing rent reduction. One can easily imagine types of violations for which this might be at least temporarily true, especially if the tenant contemplates moving to new quarters before the violation and consequent damage become pressing annoyances. Again, we have no way of measuring the frequency of such behavior.

One indication that rent control, as it operated prior to the 1970 changes in the law, impedes landlord-tenant negotiations over maintenance and service levels comes from a field survey conducted in 1969 by Louis Harris and Associates.¹⁷ Some 431 families living in 40 different transitional (ethnically changing) neighborhoods were interviewed at length to ascertain their attitudes toward their housing, their landlords, and their neighborhoods.

Of the families interviewed, 71 reported that their apartments were uncontrolled, 279 reported that their apartments were controlled, and 81 professed uncer-

¹⁶ Frank S. Kristof, *People, Housing, and Rent Control in New York City*, City Rent and Rehabilitation Administration, June 1964, pp. 42-46 and Table 19. Regrettably, such comparisons have not since been made. We should note that all gross and contract rent data employed or cited elsewhere in the present volume are tenant-reported.

Kristof comments that "There is no basis for determining to what extent these disparities represent landlord failure to report legitimate rent changes (i.e., "self-help"), ignorance of the law on the part of tenants or landlords, deliberate violations, or informal agreements between tenants and landlords outside the Rent Law." (*Ibid.*, p. 46.)

¹⁷ The survey, financed by the Fund for the City of New York, was designed with the assistance of the Housing and Development Administration and the Bureau of the Budget of New York City, the Vera Institute of Justice, and the New York City-Rand Institute. A portion of the findings are presented here by permission of Louis Harris and Associates, who are not responsible for our interpretation of the data.

tainty. Each respondent was asked to comment on the importance to him of each of a list of housing and neighborhood features, the relevant items of which are reproduced in the stub of Table 23. For those features he thought were important *and* lacking in his present apartment, he was asked about his willingness to pay \$30 more rent per month in order to have the feature in question.

Responses are shown in Table 23 by control status of the respondent's apartment. As shown in the first column of the table, tenants of controlled units were more often satisfied with the size of their apartments than were "uncontrolled" tenants or those uncertain about the control status of their apartments. On issues of maintenance, services, and building security—all problems that are conceivably remediable by the landlord—"controlled" tenants were more often discontented, although the differences are too small to be clearly significant. For all tenants, building security was the greatest source of dissatisfaction.

Table 23

DISTRIBUTION OF FAMILIES IN TRANSITIONAL NEIGHBORHOODS BY WILLINGNESS TO PAY MORE FOR FEATURES LACKING IN PRESENT APARTMENT, BY CONTROL STATUS: NEW YORK CITY, 1969

Feature Desired but Lacking in Present Apartment, by Control Status of Present Apartment	Percent Dissatisfied ^a	Number of Usable Responses ^b	Willingness To Pay \$30 More per Month (Percentage Distribution)			
			Totals	Willing	Not Sure	Not Willing
<i>Apartment that is big enough:</i>						
Tenants of uncontrolled units	32	23	100	26	13	61
Tenants of controlled units	20	55	100	35	13	53
Control status uncertain	31	24	100	46	8	46
<i>Apartment in building in good repair outside and well-kept inside:</i>						
Tenants of uncontrolled units	32	22	100	23	—	77
Tenants of controlled units	35	96	100	28	15	57
Control status uncertain	32	26	100	50	19	31
<i>Apartment in building with good service and a good superintendent:</i>						
Tenants of uncontrolled units	32	23	100	17	4	78
Tenants of controlled units	36	101	100	20	25	55
Control status uncertain	28	22	100	54	9	36
<i>Apartment in building with good security against intruders:</i>						
Tenants of uncontrolled units	42	30	100	13	10	77
Tenants of controlled units	45	121	100	21	19	60
Control status uncertain	38	31	100	29	16	55

SOURCE: Unpublished tabulations from a field survey conducted by Louis Harris and Associates.

NOTE: Percentages may not add exactly to 100 because of rounding. See text for description of survey and explanation of entries.

^a Based on the following numbers of interviews: 71 "uncontrolled" tenants, 279 "controlled" tenants, and 81 tenants uncertain about control status.

^b In some cases, less than the number expressing dissatisfaction.

What is most pertinent to the present discussion is the willingness of those who *were* dissatisfied to pay more for better maintenance, services, or building security. Comparing the three groups of tenants on these items, we can see from the last column of the table that 77 to 78 percent of those living in *uncontrolled* units were definitely unwilling to pay more to remedy their dissatisfactions; in contrast, only 55 to 60 percent of those living in *controlled* units and only 31 to 55 percent of those who were *uncertain about their control status* were unwilling to pay more.

In other words, over three-fourths of the "uncontrolled" tenants dissatisfied with the quality of their housing were nonetheless convinced that they had allocated as much to housing as they could afford. Among dissatisfied "controlled" tenants, 40 to 45 percent were apparently unable to get the maintenance, service, and security they wanted despite their willingness to pay for it. We interpret these results as evidence that the present system of rent control inhibits tenant-landlord bargaining on these issues, thereby suppressing effective demand for better housing.

To support this interpretation, however, we must account for the responses of those tenants who were not sure whether they lived in controlled or uncontrolled apartments. This uncertainty implies that rent control regulations have never impeded tenant-landlord bargaining, yet the responses of these tenants show great readiness to spend more than they now do, especially for better maintenance and services.

Their responses are particularly striking when we consider that this group of tenants reported incomes well below those who knew the control status of their apartments. Over half reported incomes under \$5,000, as compared with 36 percent of the "controlled" tenants and 28 percent of the "uncontrolled" tenants. A very plausible explanation offers itself, however, when we note that 30 percent of those who were uncertain of the control status of their housing were welfare clients. Since the Department of Social Services pays actual contract rents (within administratively determined limits) for welfare clients, the welfare client has no particular reason to begrudge the landlord a higher rent nor to concern himself with the control status of his apartment. His willingness to pay more for better housing is vicarious.

There are welfare clients among the "controlled" and "uncontrolled" tenants as well, but relatively few: 16 and 11 percent, respectively. With the proportions so nearly the same in these two groups, the marked difference in their willingness to pay more for better housing cannot easily be attributed to the "welfare effect." We do not wish to claim too much for this evidence; it is a small sample from a specialized universe (transitional neighborhoods). Such as it is, however, it supports the thesis that rent control suppresses effective demand for housing quality.

RENT CONTROL AND HOUSING EXPENDITURES

In Ch. IV we presented the results of a regression analysis of rent expenditures in 1968 by households of different incomes, composition, and social characteris-

tics. The analysis indicated that of two households similar in these respects, one living in uncontrolled housing, the other in controlled housing, the former typically spent more for rent.

There are two plausible explanations for this finding that are consistent with our general knowledge of household budgetary behavior. One is that uncontrolled housing was enough superior to controlled housing as a consumer good to compensate its tenants for its higher price; the other is that controlled housing is a bargain that all would appreciate but to which not all have access by reason of its limited supply.

We think that both explanations apply in part, but that the second is more important. Earlier in this chapter, we presented evidence to show that controlled housing is priced, on average, \$54 per month below its market value—i.e., below the value that consumers place on uncontrolled housing of corresponding location, size, and condition. The bargain is typically greater for housing in Manhattan, less for housing in the outer boroughs; greater for housing in post-1929 buildings, less for housing in Old-Law or New-Law tenements.

Even granted that controlled rents are well below the market rents of similar housing, it is often argued that some, or even that most, tenants of controlled housing could not afford to pay market rents on the units they presently occupy; though they may be getting a bargain, the bargain is essential to their well-being.

Obviously, a family cannot for any extended period of time afford to spend more for consumption of all kinds than it receives as income. Beyond this primitive proposition, what a family can “afford” is very much a matter of subjective judgment. By economizing on clothing or entertainment, it can spend more for food or for housing; alternatively, it can economize on housing in order to be able to “afford” an automobile. There is a good deal of flexibility in household budgets.

The fact that a family in uncontrolled housing typically pays more rent than a family in controlled housing living in the same borough and matched on income, household size, age, sex, and ethnic background of household head means that there is some sense in which most families in controlled housing can “afford” to pay more rent than they presently do. The fact that the housing they occupy is usually valued by the market at more than they pay for it means that there would be no obvious inequity in requiring them to pay more. These two propositions do *not* imply that it is socially desirable for all families to spend as large a fraction of their incomes for rent as do tenants of uncontrolled housing; one could easily argue the opposite, that tenants of uncontrolled housing pay too much, thereby depriving themselves of a socially desirable standard of living in other respects.

In this section, we try to estimate the extent to which rent control has influenced aggregate housing expenditures in New York City. Our calculation addresses the following question: If tenants of controlled housing spent as much on rent as their “uncontrolled” counterparts, matched on location, income, and family characteristics, how much would their housing expenditures then increase?

To make this calculation, we have taken regression equations, fitted to the observed expenditure behavior of “uncontrolled” tenants in Manhattan and in the other boroughs, and applied them to the observed incomes and family characteris-

tics of a sample of 6,479 "controlled" tenants in those same locations. (These equations are presented in Appendix C.) This procedure yields the *hypothetical rent expenditure* of each controlled household in the sample: an estimate of the amount that the household would have spent for housing if its expenditure behavior had been the same as that of a similar household in the uncontrolled sector.

We then compared this estimate with the *actual rent expenditure* by that household for the controlled housing it occupied at the time of the survey. We interpret the difference as an estimate of *the rent increase that the family would have tolerated if deprived of access to housing priced below its market value and offered housing equivalent in location, size, and quality to the housing occupied by its counterpart family in the uncontrolled sector.*

Figure 28 summarizes the results of this procedure, grouping sample households by income. The hypothetical and actual rents shown for each income group are mean values for households in that group. As one would expect, mean gross rents reported by these households increase with income, quite regularly for incomes up to \$9,000, less regularly thereafter. Mean hypothetical rents computed for each household are substantially greater than reported rents at every level of income. The differences increase with income, from about \$40 per month for families with incomes below \$5,000 to about \$280 per month for families with incomes over \$25,000. Expressed as percentages of reported rent, the differences also generally increase with income, from a low of 44 percent for incomes under \$4,000 up to 130 percent for incomes of \$25,000 or more. These differences can be interpreted as the percentage rent increases that households in each income group could pay, on average, without exceeding the rent expenditures of their counterparts in the uncontrolled sector.¹⁸

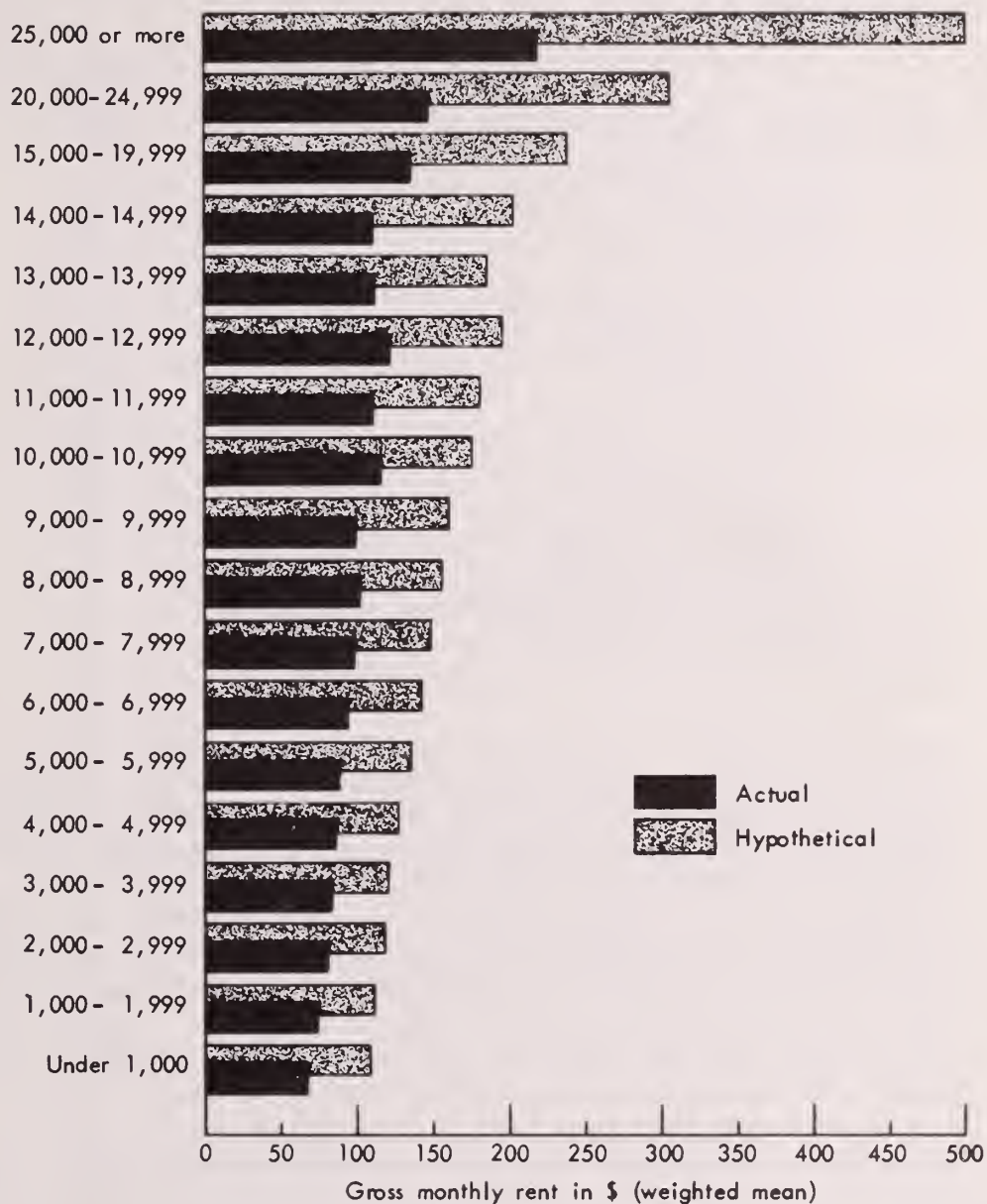
To get another perspective on these data, we have divided the sample households into two groups: residents of Manhattan and residents of other boroughs. Within each group, Table 24 compares hypothetical and reported rents by ethnic background and sex of the household head.

Among white households, we find large differences in mean hypothetical rents, ranging from \$218 for Manhattan households headed by males to \$122 for households in other boroughs headed by females. Mean reported rents are much lower, but follow the same pattern of variation. Among nonwhite and Puerto Rican households of each type and location, variations in mean values of hypothetical and reported rents are comparatively small and there is less difference (\$25 to \$34) between hypothetical and reported rents of each group than is the case among white households.

These data imply that white households now living in controlled housing could pay rent increases ranging from 48 to 91 percent of their present rents without exceeding the rent expenditures of similar families now living in uncontrolled housing. For nonwhites and Puerto Ricans, the tolerable rent increases, by this standard,

¹⁸ For incomes under \$6,000, this interpretation is clouded by the fact that about 30 percent of these households are welfare recipients whose budget allocation between housing and other goods is determined by the Department of Social Services.

ANNUAL INCOME in \$



SOURCE: Appendix Table D-13.

Fig. 28—Comparison of hypothetical and actual rents paid by tenants of controlled housing, by income of tenant: New York City, 1968

Table 24

COMPARISON OF HYPOTHETICAL AND ACTUAL RENTS PAID BY TENANTS OF
CONTROLLED HOUSING, BY ETHNIC GROUP AND SEX OF HOUSEHOLD HEAD:
MANHATTAN AND OTHER BOROUGHES, 1968

Average ^a Gross Monthly Rent, by Ethnic Group of Household	Manhattan		Non-Manhattan	
	Male Head	Female Head	Male Head	Female Head
<i>White Non-Puerto Rican</i>				
Hypothetical rent	\$218	\$176	\$144	\$122
Actual rent	114	102	96	82
Difference	104	74	49	39
<i>Percent of actual rent</i>	<i>91.2</i>	<i>72.5</i>	<i>51.0</i>	<i>47.6</i>
<i>Nonwhite or Puerto Rican</i>				
Hypothetical rent	\$116	\$120	\$128	\$117
Actual rent	82	83	91	92
Difference	34	36	37	25
<i>Percent of actual rent</i>	<i>41.5</i>	<i>43.4</i>	<i>40.7</i>	<i>27.2</i>

SOURCE: Analysis by NYCRI of unit records of the New York City Housing and Vacancy Survey of 1968.

NOTE: See text for interpretation and method of computation.

^a Arithmetic means of sample observations, each observation weighted by its sample expansion factor.

range from 27 to 43 percent. The differences reflect mostly the higher average incomes of white households, particularly those living in Manhattan. They also reflect the fact that white households typically spend a greater fraction of their incomes for housing than do nonwhite and Puerto Rican households.

Expanding these findings to cover the entire population of 1,238,900 households living in controlled units and paying cash rent in 1968, we estimate that their rent expenditures would increase from \$1,406 million annually to \$2,175 million under the conditions we have specified. In other words, judging by the budgetary behavior of families living in uncontrolled housing, those living in controlled housing could pay an increase in rent of about \$769 million annually.

It is interesting to note that this estimate of aggregate hypothetical rent (\$2,175 million annually) is quite close to the estimate, presented earlier in this chapter, of the market rental value of controlled housing units (\$2,209 million annually). In other words, our analysis indicates that if tenants of controlled housing were to pay the full market rents on the dwellings they occupy, they would, on average, be paying about the same as their counterparts who live in uncontrolled housing. The implication is that tenants of controlled housing consume neither substantially more nor substantially less housing than similar families who live in uncontrolled housing; the principal difference is that "controlled" tenants pay considerably less than the market value of the housing they consume.

SUMMARY

In this chapter, we have tried to identify the beneficiaries of rent control and to estimate the amount of the benefit they receive. We have also tried to show how the existing system of rent control has affected the pattern of housing consumption and rent expenditures in New York City. Our principal findings are:

1. While rent control provides budgetary protection for groups that most people agree have special need for such protection—the poor, the elderly, households headed by females, and members of unassimilated minority groups—it is badly targeted in the sense that many occupants of rent-controlled apartments do not belong to these groups, and many families that do belong live in uncontrolled rather than controlled housing. By one fairly generous definition of poverty, about 80 percent of the poor live in controlled housing, but about 45 percent of those who live in controlled housing are not poor.
2. Despite the generally lower quality of controlled housing, it is a substantial bargain to its tenants in the sense that the rents they pay are typically well below the rents that their housing could command in an unregulated market. We estimate that the total annual benefit to tenants of rent-controlled housing is roughly \$800 million, an average of \$650 per family. These benefits derive in part from revenue foregone by building owners, in part from real estate taxes foregone by the City. The benefits are larger for tenants of post-1929 multiple dwellings, especially those located in Manhattan.
3. It is often argued that rent control results in a serious misallocation of housing, with small families occupying larger apartments than they otherwise would. Although it is true that small households are more likely to occupy large controlled apartments than large uncontrolled apartments, this fact can be as easily attributed to the relative scarcity of small controlled apartments as to the relatively low rents of large ones; we do not find much evidence that “misallocation” of housing in this sense is greater in the controlled than in the uncontrolled sector of the housing stock.

We do find evidence that many tenants of controlled housing accept lower standards of maintenance, services, and building security than they are willing to pay for, and we suspect that the mechanics of rent control tend to prevent them from reaching bargains with their landlords that would be beneficial to both parties.

Perhaps the clearest effect of rent control on housing demand has been to modify the relative advantages of living in Manhattan and in the outlying boroughs. Rent-controlled housing in Manhattan is a superlative bargain for most of the 387,000 families who occupy it. On average, they pay about \$1,200 less per year than their housing would command at current rents in the uncontrolled market.

4. Taking into account the age, sex, and ethnic backgrounds of heads of households, their incomes and family sizes, and the location of their housing, we estimate that tenants of controlled housing could pay rent increases averaging \$50 per month without exceeding either the rent expenditures of similar families in uncontrolled housing or the market value of the controlled housing they presently occupy. The differences between rents paid by controlled and uncontrolled families are less than \$40 at incomes below \$5,000, rising to \$100 or more for families with incomes over \$15,000.

The last point must be understood clearly. We do not argue that rents paid by tenants of uncontrolled housing are easily managed; those with low incomes may be badly straining their budgets. In Ch. VI and Ch. VII, we explore the welfare implications of various levels of housing expenditure by low-income families in an attempt to arrive at an operational definition of ability to pay for housing of socially acceptable quality. Our point here is simply that the division of New York City's housing market into controlled and uncontrolled sectors has resulted in highly unequal treatment of families with similar claims to public consideration.

VI. RENT-PAYING ABILITY AND HOUSING COSTS

City policies of rent regulation and housing assistance reflect an enduring consensus that some of the City's residents cannot afford the full costs of the housing they should occupy, prompting public intervention in the housing market for their benefit. As we shall see, the consensus does not extend to agreement as to which of the City's households need help with their housing expenses and which do not. This chapter reports our search for an indicator of "ability-to-pay" for housing that not only reflects the broader public objectives of housing policy but is sufficiently operational to provide guidance for housing assistance programs.

While we bring to this task as much science as we can muster, we do not suppose that judgments about the ability of a family to pay for adequate housing can be made on strictly scientific grounds. Such judgments surely must deal on the one hand with a family's resources, with its requirements for nonhousing consumption, and thus with its ability to pay rent out of a limited budget; and on the other hand, with the standards of space and housing quality that are important for family welfare and with the costs of achieving these standards in the City's housing markets. And "scientific" judgments must be compared with individual families' judgments on these issues.

It is equally impossible to determine, on strictly scientific grounds, how far the public interest should be engaged with standards of space or housing quality. It is clearly not in the public interest to permit families to live in unhealthful or dangerous quarters. But we are able to identify as such only the most obvious threats to health and safety; housing standards involved in public discussion usually go beyond these to matters of comfort and decency that reflect an intuitive public consensus that shifts over time, rather than any measurable consequences of housing deficiencies. Standards of space and quality are nonetheless necessary to our analysis, since they affect the cost of housing to the tenant.

Though we do not entirely suppress our own judgments about these matters, we have no wish to impose them on the reader. Rather, we hope to help him reach his own conclusions about the ability of households to pay for housing of a given size and quality by pointing out the difficulties with conventional rent and income standards and the appealing properties of the criterion we propose. We proceed as follows:

First, we briefly review the findings presented in earlier chapters concerning rent expenditures by the City's residents, and the relationship of these expenditures to household incomes. Next, we examine the precedents set by housing assistance programs now operating in New York City. Then we review a budget study published by the Community Council of Greater New York that specifies the components and costs of a "low-to-moderate" standard of living in New York City, comparing its rent allowances with typical rents for standard housing in 1968 and with typical rent expenditures by families with low-to-moderate incomes. We also test some rules of thumb for housing expenditures that are traditional among housing experts. Finally, we explore the adequacy of the Council's rent allowances in relation to the cost of supplying housing that meets its standards of space and quality.

Our findings lead us to the conclusion that the need for housing assistance is best measured by disposable rather than gross income, and that the need criterion should vary with household size. We offer for the reader's evaluation a schedule of disposable incomes, tied to the concept of a low-to-moderate standard of living, and reflecting consumer prices and housing costs in 1966-1968, the most recent years for which good data are available.

PATTERNS OF RENT EXPENDITURE IN NEW YORK CITY

In the two preceding chapters, we showed how rent expenditures have risen over time in New York City, relating these changes to concurrent changes in the incomes of renter households; and how rent expenditures in 1968 varied with the incomes and other characteristics of renter households and also with the location and control status of the housing they occupied.

Our historical data show little change since 1950 in the proportions of household incomes spent for rent by self-supporting families; the slight upward shift in rent/income ratios since 1960 appears to be wholly attributable to the growth of the City's welfare program and its emphasis on rent allowances. Conceivably, stability over time in the rent/income ratios of self-supporting families might reflect only proportional changes in the prices of housing and the incomes of renter households, so that "real" budgets were unchanged. However, this does not seem to be the case. Between 1950 and 1968, the median real income (purchasing power) of renter households increased by 23 percent and the amount of housing they consumed (as measured by rooms per person) increased by 18 percent. In other words, as real incomes increased, real housing consumption increased nearly in proportion.¹

Our data for 1968 show that rent expenditures tend to rise with income, but less than proportionately, so that rent/income ratios typically are highest for poor families and lowest for wealthy families. When households are matched on income,

¹ It should be apparent that these comparisons are imprecise. The amount of housing consumed is not adequately measured by the number of rooms, and income per household has a different denominator than housing consumption per person. Since average household size declined, however, the data as given

we find minor differences in rent expenditures associated with differences in household size and in the age, sex, and ethnic group of the head of the household. On the other hand, we find rather large differences in the rents paid by those living in controlled housing and those living in uncontrolled housing, even when the two groups are statistically matched on income and other household characteristics; and even larger differences between rents paid by tenants of uncontrolled housing in Manhattan and by similar tenants of uncontrolled housing in the outer boroughs.²

Thus, budget allocations between housing and other goods reflect not only consumer preferences and incomes but the costs of the two kinds of consumption. For the two-thirds of the City's renter households that occupy controlled units, the price of housing has been regulated by the City in a way that has encouraged them to shift to nonhousing consumption, often at the expense of their housing standards.

These facts about actual rent expenditures in New York City are instructive, and will serve us well later in this chapter. However, they do not tell us whether, from the standpoint of the public interest, these expenditures are too high or too low. We turn now to a review of the judgments on this issue embodied in existing programs of housing assistance.

PRECEDENTS IN HOUSING ASSISTANCE PROGRAMS

Most housing assistance programs now operating in New York City use schedules of maximum incomes by family size to determine eligibility for admission and, often, for continued participation. These schedules can be interpreted as official definitions of rent-paying ability in the sense that a family of a given size with an income below the specified level is presumed by the program to be unable to afford the full cost of the housing provided. Some programs go further, explicitly setting the minimum fraction of family income that participants must pay toward the cost of their housing; in others, such minimum rent/income ratios are implicit in the schedule of rents, given the schedule of maximum incomes.

These requirements vary considerably, as does the amount of rent assistance provided through direct or indirect subsidies and the quality of housing provided to participants. Table 25 summarizes income limits and the explicit or implicit minimum rent/income ratios of eleven housing assistance programs, ranging from real estate tax exemptions for privately operated middle-income housing to full rent subsidies for welfare clients. To indicate how these requirements vary with

are clearly inconsistent with the hypothesis that no "real" growth occurred in incomes or housing consumption.

For supporting data on the trend in rent/income ratios since 1950, see Table 13 in Ch. IV. Table 14 shows rent/income ratios for welfare clients; the increase in welfare dependency is discussed in Ch. III, "Public Assistance as a Source of Income." The change in the median income was computed by deflating current-dollar income data in Appendix Table C-2; the consumer price index rose 47.6 percent over the period in question. The change in number of rooms per person for renters is documented in Appendix Table A-6.

² See Ch. IV, "Rent Expenditures in Four Housing Submarkets."

Table 25

INCOME AND RENT/INCOME LIMITS FOR ADMISSION TO SELECTED HOUSING
ASSISTANCE PROGRAMS: NEW YORK CITY, 1969

Housing Assistance Program	Maximum Gross Income for Admission, by Number of Persons			Minimum Rent/Income Ratio after Assistance, by Number of Persons		
	1	4	7	1	4	7
Limited profit (Mitchell-Lama) companies: parallel State and City programs	\$6,700	\$14,930	\$16,930	.17	.14	.14
Limited dividend companies: joint State and City program	6,700	14,930	16,930	.17	.14	.14
Private redevelopment companies: joint State and City program	6,700	14,930	16,930	.17	.14	.14
Low-rent assistance for Mitchell- Lama tenants: State program	5,600	10,600	12,000	.20	.20	.20
Interest-rate subsidy: Federal program (Sec. 221(d)(3) BMIR)	7,500	11,350	15,500	.19 ^a	.19 ^a	.19 ^a
Interest-rate subsidy: Federal program (Sec. 236)	5,500	8,800	12,750	.25	.25	.25
Rent supplements: Federal program (Title I)	4,540	7,310	9,450	.25	.25	.25
Public housing: Federal program	5,520	6,050	8,290	.13 ^b	.17 ^b	.15 ^b
Public housing: State program	6,500	7,635	8,620	.17	.17	.14
Public housing: City program	6,840	8,730	9,490	.17	.17	.14
Public assistance: joint Federal, State, and City program	1,890 ^c	3,810 ^c	6,200 ^c	.46 ^d	.28 ^d	.22 ^d

SOURCE: Appendix Table E-1.

NOTE: This table condenses and simplifies complex schedules of income limits and implicit or explicit rent/income ratios whose details and qualifications are elaborated in Appendix E. In general, we have based the figures shown here on data for recent projects, and have assumed that all applicant families contain only one earner; that four-person families include two minor children, and that seven-person families include five minor children. Estimates of typical gross income limits are more or less rounded according to the precision of the data on which they are based. Except as indicated, minimum rent/income ratios are explicit program requirements.

^a Maximum rent/maximum income; limit could be lower.

^b Minimum ratios vary among projects; figures shown are typical limits.

^c Limits approximated by upper quartile values of assistance grants plus outside income in 1969.

^d Rent allowances are not functionally related to incomes; figures shown are not limits but median values.

household size, the table shows them for persons living alone, for households of four persons, and for households of seven persons.³

The middle-income programs are the first three listed. They provide public assistance in the form of low-interest loans and/or real estate tax exemptions to limited-profit (Mitchell-Lama), limited-dividend, and redevelopment housing companies. Either by statute or administrative decision, income limits for admission to these programs are expressed as multiples of annual rents. These rents, in turn, are set for individual housing units according to schedules designed to keep the projects solvent; they depend, in part, on current subsidy formulas. The income limits thus vary among projects and are subject to change as the costs of project operation change. Tenant-paid rents in these projects are not adjusted to the budgets of individual families, so that rent/income ratios can and do vary substantially among families accepted by the programs. However, the statutory or administrative formulation of income limits for admission implies *minimum* rent/income ratios ranging from .17 for small families to .14 for large families. These minima are shown in the last three columns of Table 25. For families with no more than one wage-earner, they applied in 1969 to maximum incomes ranging from \$6,700 for a single person to nearly \$17,000 for five or more persons.

There is, however, a supplementary program designed to enable "low-income" families to participate in the Mitchell-Lama program. It covers families whose maximum incomes in 1969 ranged roughly from \$5,600 for one person (employed) to \$12,000 for five or more persons (one employed person). Families were required to pay 20 percent of their incomes toward the scheduled rent of the apartment they occupied, with the State Low-Rent Assistance Bureau covering the remainder.

There are two Federal programs that provide mortgage interest rate subsidies on behalf of tenants of private housing. These are small programs in terms of volume and seem to be aimed at families whose incomes are below Mitchell-Lama levels but above Federal public housing levels. Maximum gross incomes for participation under Sec. 221(d)(3) ranged in 1969 from about \$7,500 for a single person (employed) to about \$15,500 for a family of seven persons; corresponding limits for most projects under Sec. 236 were \$5,500 and \$12,750, though some had higher limits. While there is no explicit minimum rent/income ratio under Sec. 221(d)(3), scheduled maximum rents for New York City in 1969 imply a minimum ratio of .19 for all family sizes. Section 236 requires all assisted families to contribute at least 25 percent of their incomes toward the rents of the housing provided.

The Federal rent supplements program also requires tenants of approved privately owned housing to pay rents equal to at least 25 percent of their incomes; the Federal government contributes the difference between this amount and the market rental value of the dwelling.⁴ Income limits are much lower than those of

³ The account of these requirements presented in Table 25 is radically compressed and simplified; it tries to reflect the dominant or normal rules of each program, as established by law or administrative regulation. A much more detailed account is given in Appendix Table E-1.

⁴ An amendment passed by the House of Representatives in 1969 would have reduced minimum rent/income ratios for the interest rate subsidy (Sec. 236) and rent supplement (Title I) programs from .25 to .20. The amendment was rejected by the Senate-House Conference Committee.

the two programs offering interest rate subsidies. A single person (employed) was limited to a gross income of about \$4,500 and a family of seven persons was limited to about \$9,500.

The public housing programs financed by Federal, State, and City governments are targeted on income groups lower than but overlapping those described in the preceding paragraph. In the Federal program, income limits for admission are at least nominally related to "prevailing community rents" for standard housing. In State and City public housing, these limits are set, as in the middle-income programs, as multiples of the annual rents paid by the tenant. The rents charged for units in Federal, State, and some City projects are scheduled to cover operating costs, net of debt service (both interest and amortization), and net of real estate taxes (except for a relatively small payment in lieu of taxes). These excluded costs are covered explicitly or implicitly by public contributions.⁵ In some City projects, rents are scheduled to cover debt service as well as other operating expenses.

Maximum incomes for admission to the public housing programs are usually lower than those for the "middle-income" programs. They are lowest in the Federal program; in 1969 they ranged from about \$5,500 for one person (employed) to about \$8,300 for a family of seven or more (one employed person). But the implicit minimum rent/income ratios were about the same as those of the Mitchell-Lama program, ranging from .17 to .13. The State and City public housing programs set higher minima for small families than for larger ones. In the Federal program, the minima vary somewhat among projects but are lower for both small and large families than for those of three to four persons.

The final program listed in Table 25 is public assistance, a joint Federal, State, and City program targeted on individuals and families whose earning capacities are in some way impaired; assistance is available to those whose incomes prior to assistance are below the subsistence budgets prepared, case by case, by the Department of Social Services. The income limits shown in the table are actually the upper quartile values of these budgets in mid-1969. Welfare grants include an allowance for contract rent equal to the amount actually paid by the client, subject to administrative limits that vary with family size. The remainder of the welfare grant is figured separately, so there is no strict functional relationship between the rent allowance and the total welfare grant. Typical rent/income ratios, however, tend to run much higher than those of nonwelfare families with equivalent incomes.⁶ Three-fourths of all welfare households have rent/income ratios above .28 and over half have ratios above .35. The housing occupied by these families consists for the most part of Old-Law and New-Law tenements, with few effective standards of quality.

⁵ In Federal projects, an additional Federal contribution of \$10 per month is provided for units occupied by elderly or handicapped persons or by families with very low incomes relative to their size. The Housing and Urban Development Act of 1969 provides for further Federal contributions to ensure that no tenant pays more than 25 percent of his income for rent, unless his income is derived from public assistance.

⁶ Since welfare clients are seldom employed persons, and since their incomes are almost always completely tax-free, the comparable income for a nonwelfare family is "disposable income," a concept developed later in this chapter.

Although the labels of some of these programs are misleading, program requirements form a reasonably consistent pattern. The highest income limits for participation are associated with housing of the best quality, with a high proportion of full costs paid by the tenant. The lowest income limits are associated with housing of the worst quality whose full costs are paid entirely from public funds. The middle ground, occupied by the public housing program, provides housing of intermediate quality, with about half of total costs borne by the public treasury.

The minimum tenant contributions to rent required by these programs are less intelligible, especially if they are viewed as a standard for household budget allocation. In the "middle-income" programs (limited profit, limited dividend, redevelopment), minimum rent/income ratios are set at .17 for small families and .14 for large families. Among the "moderate-income" programs (e.g., low-rent assistance, interest rate subsidies), they vary from .25 to .19, with no differences by family size. In the "low-income" public housing programs, they range from .17 to .13, in some cases increasing and in others decreasing with family size. The Federal rent supplements program, with the same income limits as Federal public housing, requires the tenant to contribute at least 25 percent of his income toward rent. Budgets constructed for welfare clients by the Department of Social Services yield rent/income ratios ranging from .46 for small families to .22 for large families.

Of course, these income limits and minimum rent/income ratios are not necessarily typical of program participants. Table 26 shows typical incomes and

Table 26
INCOMES AND RENT/INCOME RATIOS OF FAMILIES ASSISTED BY SELECTED HOUSING
PROGRAMS, BY HOUSEHOLD SIZE: NEW YORK CITY, 1968-1969

Number of Persons	City Mitchell-Lama, 1968		Public Housing, 1968		Public Assistance, 1969	
	Average Gross Income ^a	Median R/I Ratio	Median Gross Income	Median R/I Ratio	Median Gross Income ^b	Median R/I Ratio
1	\$ 5,740	.23	\$1,600	.35 ^c	\$1,670	.46
2	8,230	.19	3,890	.23	2,260	.39
3	9,940	.18	5,310	.18	2,860	.32
4	10,830	.18	5,590	.18	3,500	.28
5	11,170	.18	5,690	.17	4,140	.25
6+	11,160	.18	5,660	.18	5,310	.22

SOURCES: City Mitchell-Lama, tabulations by NYCRI from Housing and Development Administration records; public housing, calculated from unpublished tabulations of the New York City Housing and Vacancy Survey of 1968; welfare households, calculated from tabulations prepared by the Bureau of the Budget of records of the Department of Social Services, Human Resources Administration.

^a Spot checks indicate that these averages are nearly identical to medians.

^b Median incomes differ from those shown in Table 8, due to exclusion here of households paying no cash rent.

^c The source table contains an open-ended class, ".35 or more." Forty-seven percent of all one-person households have ratios lower than .35.

rent/income ratios by household size for three programs targeted on different income groups. While the available measures of central tendency differ slightly, the numbers are reasonably comparable. We leave it to the reader to compare these typical incomes and rent/income ratios to program maxima and minima, shown in corresponding detail in Appendix Table E-1. Our present interest lies in the contrasts and similarities among the three programs.

First, consider the Mitchell-Lama and public housing tenants. The incomes of public housing tenants are roughly half those of Mitchell-Lama tenants, but rent/income ratios are about the same for all except one- and two-person families; among those families, the public housing tenants pay a substantially larger share of their incomes for rent.

Second, consider the public housing tenants and the public assistance tenants. Median incomes of welfare households range from about 50 to 80 percent of the median incomes of public housing tenants, the largest differences occurring among families of two to four persons. The welfare households, especially the small ones, have substantially higher rent/income ratios than their public housing counterparts.

The significance of some of these differences in terms of budget allocation is arguable. Among public housing tenants, most incomes of one- and two-person households derive from nontaxable transfer payments, like those of welfare clients. Thus, the full sum is available for housing and other consumption expenditures. But most of the larger families in public housing derive their incomes from employment, and these incomes are large enough to be subject to income taxes and involuntary insurance deductions; in addition these families incur work-related expenses. Therefore, the amount available for consumption is considerably less than the gross income shown.⁷ Among welfare households of all sizes, the entire household income is usually tax-free and the household usually has no work-related expenses. Thus, the entire welfare income can be spent on consumption items.

If we were to adjust gross incomes to account for tax and insurance deductions and necessary expenses of employed persons, the differences in rent/income ratios between public housing tenants and welfare clients would diminish. They would not, however, vanish. Welfare households typically have smaller consumption budgets than do public housing tenants, and spend a larger fraction of their consumption budgets on housing whose quality is usually inferior to that occupied by public housing tenants.

A LOW-TO-MODERATE BUDGET STANDARD

In our review of existing programs of rent assistance, we encountered a wide variety of explicit or implicit criteria of ability to pay. Not only were these programs

⁷ At the median incomes indicated in Table 26, the typical tax rates in 1968 (including Federal, State, and City income tax and FICA and disability contributions) would be: for three persons, 14 percent; four persons, 13 percent; five persons, 11 percent; six persons, 6 percent; seven or more persons, no tax.

targeted on a variety of income groups, but the rent payments required of tenants in different programs who had the same incomes also differed. Expressed as minimum rent/income ratios that sometimes vary with family size, these criteria have no self-evident logic, either within or between programs. The typical ratios reported by program participants are naturally above the minima, but there is no self-evident logic to these typical ratios either.

A rent/income ratio implies a certain allocation of a household budget between housing and nonhousing consumption. We have so far confined our attention to the housing portion of the budget. We can, perhaps, find additional clues to the logic of rent/income ratios if we examine the nonhousing portion. It is not a proper field for extensive inquiry on our part; we lack credentials and have only a limited interest. We shall therefore rely heavily on the work of the Community Council of Greater New York, whose Research Department has devoted much time and effort to the study of family budgets, consumption requirements, and living costs for residents of New York City. In 1963, the Community Council published a "family budget standard [which] provides a measure of the cost of living requirements in New York City for self-supporting families of any size and composition." It was designed to meet specific standards for nutrition and health insofar as such standards exist, and otherwise to reflect "social standards that have been revealed by studies of actual family purchases. The kinds of goods and services priced and used in the calculation of costs are typical of purchases made by families in the low-to-moderate income groups."⁸

The Council conducts annual surveys of retail prices in New York City which serve as the basis for current estimates of the cost of purchasing the goods and services specified by the family budget standard. The quantities and types of goods included in the 1967 edition of the *Annual Price Survey*⁹ are those of the 1963 *Family Budget Standard*, which is in turn an adaptation of budgets published by the U.S. Bureau of Labor Statistics in 1960. Thus, the "market basket" is somewhat out of date.

With that qualification, we offer the Community Council's October 1967 budget data as reasonable figures against which to test policies with respect to rent/income ratios and estimates of how much New York City's renter families can afford to spend for housing.

Budget Variations with Family Size and Composition

Table 27 shows the principal components of the consumption budgets for families of selected sizes and compositions and the gross incomes needed to cover these budgets after allowance for income taxes and involuntary insurance. There

⁸ Budget Standard Service, Research Department, Community Council of Greater New York, *A Family Budget Standard*, 1963, p. 1.

⁹ Idem., *Annual Price Survey—Family Budget Costs, October 1967*, Eleventh Edition, 1968. Although the Twelfth Edition is now available, the prices for October 1967 given in the Eleventh Edition seemed more nearly comparable to data from the Housing and Vacancy Survey of 1968, including incomes reported for calendar 1967.

Table 27
COMMUNITY COUNCIL ESTIMATES OF ANNUAL COSTS OF LOW-TO-MODERATE LEVEL OF LIVING:
SELECTED FAMILIES, NEW YORK CITY, OCTOBER 1967

Family Composition ^a	Number of Persons	Annual Expenditure Allowances				Income Taxes and Involuntary Insurance ^c	Gross Income Required
		Gross Rent	Work-Related Expenses ^b	Other Goods and Services	Total		
Retired woman (65), living alone	1	\$ 876	(d)	\$1,357	\$2,233	(d)	\$ 2,233
Employed woman (45), living alone	1	876	\$ 744	1,489	3,109	\$ 737	3,846
Unemployed woman (25), one child (4)	2	1,037	(d)	2,257	3,294	(d)	3,294
Retired man (65) and wife	2	1,037	(d)	2,513	3,550	(d)	3,550
Man (24) and wife, both employed	2	1,037	1,464	2,665	5,166	1,158	6,324
Man and wife, man employed:							
Man (27), one child (3)	3	1,209	645	3,183	5,037	922	5,959
Man (30), two children (6, 4)	4	1,222	645	3,952	5,819	986	6,805
Man (37), two children (13, 8)	4	1,222	645	4,434	6,301	1,109	7,410
Man (40), three children (16, 13, 10)	5	1,227	645	5,686	7,558	1,270	8,828
Man (40), four children (16, 13, 10, 8)	6	1,342	645	6,232	8,219	1,349	9,568
Man (40), five children (16, 13, 10, 8, 6)	7	1,344	645	7,038	9,027	1,373	10,400
Man (40), six children (16, 13, 10, 8, 6, 4)	8	1,349	645	7,631	9,624	1,375	11,000

SOURCE: Computed from weekly allowances given in Community Council of Greater New York, *Annual Price Survey, Family Budget Costs, October 1967*. Eleventh Edition, 1968, pp. 13-14, 31-33.

NOTE: Data for families of six to eight persons were taken from a table with less detail about family composition than data for smaller families.

^a Age of head of household, indicated in parentheses, is more specific than, but consistent with, family descriptions in the source. Ages of children, also in parentheses, are specified in the source, except for families of six to eight persons.

^b Includes lunches away from home, carfare to work, union dues, extra costs for clothing and personal care, and extra costs for laundry of employed couple.

^c Includes Federal, State, and City income taxes, FICA, and State Disability Insurance premiums, all figured on the basis of the gross income shown in the final column.

^d Assumes no work-related expenses, income taxes, or involuntary insurance for families with no employed persons.

are several things worth noting about the consumption budgets. First, holding a job is expensive, especially for a woman. Second, children are expensive, and their cost increases with age. Third, elderly adults can get by on slightly less than young ones, even when work-related expenses are not considered.¹⁰ The real advantages of the elderly, however, are that they have no work-related expenses, and their incomes are assumed to be tax-free.

Families dependent on earnings from current employment not only incur work-related expenses (transportation to and from work, meals away from home, union dues, etc.), they are also subject to Federal, State, and City income taxes on their earnings and must contribute to the Federal Social Security fund (FICA) and to the State Disability Insurance fund. Taking into account these levies, which vary with gross income, number of employed persons, and number of dependents, we have estimated, in Table 27, the gross income needed by each family to yield a net amount equal to the Community Council's total annual expenditure allowance. For those who are retired or unemployed, tax-free gross incomes are entirely available for consumption expenditures; for those who are employed, tax and insurance payments of as much as \$1,375 must first be deducted from gross income.¹¹

It is also helpful to place the Community Council's low-to-moderate level of living in the distribution of incomes reported by the Housing and Vacancy Survey of 1968. In Table 28, the gross incomes required to support this level of living for families of each size are compared with median and quartile incomes in 1967 for all the City's households and for all renter households. The Council's highest budgets for families of one to four persons are below the medians for all households of corresponding sizes, and close to the medians for all renters. The lowest budgets, those for one- and two-person families whose members were unemployed or retired, are close to the lower quartiles of income for households of these sizes.

For families of five or more persons, however, the Council's low-to-moderate budgets are above median incomes for households of corresponding sizes. The Council's five-person family, with one employed member, needed a gross income of \$8,828, about 111 percent of the median income of all five-person households and 131 percent of the median for five-person renter households. For six to eight persons, the Council's budgets required gross incomes ranging from \$9,568 to \$11,000, amounts that would place them among the most prosperous fourth of all households of six or more persons and among the most prosperous fifth of all renter households of that size.

The reader's initial reaction to these anomalous findings may be to question the Community Council's description of its budgets for large families as accurately representing low-to-moderate levels of living. On the contrary, the comparisons

¹⁰ One reason is that budgets for the elderly make no allowance for life insurance, the only form of voluntary savings included in these budgets. Life insurance premiums for the young employed couple are budgeted at \$86 annually, rising to \$120 for the employed husband, age 40, with three children.

¹¹ The amounts of gross income required to support low-to-moderate levels of living for these families are not necessarily typical or even plausible earnings. For instance, a low-to-moderate level of living for the young employed couple required a gross income of \$6,324; for two persons working a 40-hour week and a 50-week year, this income implies an improbably low hourly wage of \$1.58. (The State minimum wage is \$1.60.)

Table 28

COMPARISON OF COMMUNITY COUNCIL LOW-TO-MODERATE GROSS INCOMES
WITH MEDIAN AND QUARTILE INCOMES OF SELECTED GROUPS,
BY SIZE OF HOUSEHOLD: NEW YORK CITY, 1968

Gross Income Measure	Amount in 1967 Dollars, by Number of Persons per Household					
	1	2	3	4	5	6 +
<i>Community Council, Selected "Low-to-Moderate Budgets"</i>						
Highest	\$3,846	\$ 6,324	} \$ 5,959	\$ 7,410	} \$ 8,828	\$11,000 ^a
Lowest	2,233	3,294		6,805		9,568 ^b
<i>All Households</i>						
Upper quartile	6,650	10,350	10,250	11,100	10,900	10,750
Median	4,000	6,600	7,100	8,350	7,950	7,650
Lower quartile	1,900	3,700	4,400	5,600	5,450	5,200
<i>Renter Households</i>						
Upper quartile	6,580	9,960	10,070	10,100	9,500	8,550
Median	4,100	6,380	6,950	7,300	6,730	6,000
Lower quartile	1,900	3,600	4,500	4,850	4,600	4,500

SOURCES: Table 27 and Appendix Tables B-5 and B-13.

^a Eight persons.

^b Six persons.

illustrate a point quite important for the analysis to follow: While the income required to support a given level of living increases with a family's size, the earning power of its breadwinner typically does not. Indeed, as reflected in the pattern of median and quartile incomes in Table 28, those who have large families tend to earn less than those who stop at two children.

Housing Standards and Rent Allowances

With these orientations, we can turn our attention to the gross rent allowances shown in the second column of Table 27. They are based on housing standards set by the American Public Health Association, covering space requirements, equipment and facilities, safety and sanitation, and access to community facilities. These general standards, which contain no surprises, need not detain us here, although we reproduce them in Appendix Table E-2. However, we do call the reader's attention to the space standards as interpreted by the Community Council's research staff; they are shown in Table 29. Excluding bathrooms from the count, these standards call for one room plus one room per person up to four persons, allowing no additional space for the fifth person but allowing an additional bedroom for the sixth person. Space allowances for families of seven and eight persons are not discussed in *A Family Budget Standard*, although contract rent and utility allowances for such families are included in the *Annual Price Survey*, discussed below.

Table 29
COMMUNITY COUNCIL HOUSING STANDARDS: NUMBER AND TYPE
OF ROOMS, BY FAMILY SIZE

Number of Persons	Number of Rooms ^a	Description of Rooms ^b
1	2	Living room, kitchen, bath
2	3	Living room, kitchen, one bedroom, bath
3	4	Living room, kitchen, two bedrooms, bath
4	5	Living room, kitchen, dining room, two bedrooms, bath
5	5	Living room, kitchen, dining room, two bedrooms, bath
6	6	Living room, kitchen, dining room, three bedrooms, bath

SOURCE: Adapted from Community Council of Greater New York, *A Family Budget Standard*, 1963, p. 34.

^a In rent surveys, bathrooms, hallways, closets, etc., are usually not counted as rooms. Kitchenettes and dinettes are counted as one-half room each. For this Standard a full-size kitchen or a kitchenette plus a dinette is counted as one room.

^b At the level of living of this Standard, it is assumed that dinette furniture is used rather than dining room furniture. Dwellings containing a room intended as a living room are used flexibly. The Standard does not provide categorical distinction between dining room and bedroom. A family of three, for example, may use the dining room as a dinette and sleeping room for a child, if the kitchen is not large enough for a dinette table and chairs.

The contract rents allowed by the Council for families of each size are essentially average rents of controlled unfurnished apartments of appropriate size as reported by the U.S. Bureau of Labor Statistics' 1959 Survey of Housing in New York City, updated to October 1967 in accordance with interim changes in the rent component of the Consumer Price Index for New York City. They

relate specifically to dwelling units with kitchen facilities which meet the standards specified for the [BLS] Interim City Worker's Family Budget. Substandard units and those above standard are excluded. The latter are defined as dwelling units having rooms substantially larger than normal size, with more than one bathroom, or located in apartment houses that provide central switchboard services, maid service or doorman service.¹²

Table 30 shows the components of the Community Council's monthly gross rent allowances by family size and by apartment size. While the allowance for utilities¹³ varies with family size regardless of the size of the apartment, the Community Council's contract rent allowances are strictly a function of apartment size.

¹² *A Family Budget Standard*, p. 31.

¹³ Our own analysis of payments for gas and electricity reported by renters in 1968 indicates that the typical expenditure for these purposes is 7 to 15 percent larger than the Community Council's allowance for apartments of three to six rooms, and about a fourth larger for two-room apartments. (See Appendix C.) It is not unlikely that tenants overestimate the average monthly costs of these utilities; the Community Council's schedule is probably the better estimate of actual, as well as standard, costs.

Table 30

COMPARISON OF COMMUNITY COUNCIL RENT ALLOWANCES WITH RENTS OF
"SOUND" CONTROLLED APARTMENTS: NEW YORK CITY, 1967-1968

Number of Persons	Number of Rooms	Community Council Monthly Allowance, 1967 ^a			Median Gross Rent for Comparable Units in 1968 ^b
		Contract Rent	Gas and Electricity	Gross Rent (rounded)	
1	2	\$65.87	\$ 7.15	\$ 73	\$ 83
2	3	77.57	8.88	86	89
3	4	90.56	10.19	101	94
4	5	90.56	11.27	102	98
5	5	90.56	11.70	102	98
6	6	99.45	12.35	112	110
7	6	99.45	12.57	112	110
8	6	99.45	13.00	112	110

SOURCES: Community Council of Greater New York, *Annual Price Survey, Family Budget Costs, October 1967*, Eleventh Edition, 1968, p. 31; and tabulation by NYCRI of data from the New York City Housing and Vacancy Survey of 1968.

^a The Council's allowances are given on a weekly basis; we computed monthly equivalents by multiplying the weekly allowances by 4.33 (= 52/12).

^b Based on data for occupied rent-controlled apartments in multiple dwellings in sound condition with all plumbing facilities. Units in apartment hotels and in converted one- or two-family houses were excluded. Median values were estimated by linear interpolation within \$10 rent intervals.

Apparently, the BLS Survey of Housing showed no difference in the average contract rents of four- and five-room units; the gross rents shown in Table 30 differ only in the amount of extra utility allowance for the fifth family member.

Identical contract rent allowances are also given for families of six, seven, and eight persons, implying either no increase in space allowed for families over six persons, or no increase in rent for a seventh room. There are precedents for either interpretation in the space standards and rent allowances for smaller families. We suspect that the scarcity of controlled seven-room apartments in sound condition in other than luxury buildings led the Council to skimp on space for families of seven or eight persons.

The last column of Table 30 shows, by number of rooms, the median gross rents of controlled apartments in New York City in 1968, including only those units in sound condition with all plumbing facilities; units in apartment hotels and in converted one- and two-family houses are excluded. As nearly as we can tell, this is the housing universe to which the Community Council's rent allowances are intended to apply. Note that these medians increase only slightly with the number of rooms, a fact which partly reflects one of the vagaries of rent control: small units turn over faster and have therefore received more frequent rent increases.¹⁴ In any case, the Community Council's rent allowances are \$10 below the median gross rent

¹⁴ See Appendix Table E-7 and the related text for more data on this issue.

for two-room apartments and about \$7 above the median for four-room apartments; they are about equal to the median gross rents for the other sizes shown. Thus, the Community Council's allowances reflect fairly accurately the rents actually paid for sound, controlled housing in 1968—with the possible exception of two-room apartments, only a third of which reported gross rents below the Community Council's allowance.

Rent Allowances vs. Typical Rent Expenditures

Table 31 compares the Community Council's rent allowances to our estimates of actual family rent expenditures in each of four New York City housing submarkets. These estimates are based on the regression analysis described in Ch. IV and Appendix C. They are typical rent expenditures in 1968 for white households of each indicated size, composition, and income. We chose white households for these comparisons not only because they are numerically predominant but because their housing expenditures in each of the four submarkets are at least as large as (in Manhattan, larger than) those of otherwise comparable nonwhite or Puerto Rican households.

With few exceptions, these typical rent expenditures were larger than the Community Council's rent allowances for households with the same gross incomes. The nearest matches are found among those living in controlled housing outside Manhattan, but even there the employed and retired women living alone and all families of five or more persons spent substantially more than the Council allowed. Among those living in controlled housing in Manhattan, only the retired woman and retired couple seemed to manage within the Council's rent allowances. Except for these, and some free-spending young couples, the controlled rents paid by Manhattan dwellers were much the same as those paid by their counterparts in the outer boroughs.

The Council's rent allowances are based mostly on rents for controlled housing, so it is not surprising that they were exceeded by the rent expenditures of those who live in uncontrolled housing. Of course, relatively few families headed by white males living in uncontrolled housing, especially uncontrolled housing in Manhattan, had incomes as low as those shown in Table 31; those that did, however, somehow managed rents that were as much as double the Council's allowance.

We conclude, then, that the Community Council's rent allowances were generally adequate in 1968 to pay for well-maintained controlled apartments of the specified sizes, possibly falling short only in the case of single persons (two-room apartments). However, households whose gross incomes corresponded to the Community Council's low-to-moderate incomes did not always choose to allocate them according to the Council's recommendations; in general, they chose to spend more on housing and, presumably, less on other items of consumption. This was especially true of households of five or more persons, even those who lived in controlled housing. For these large families, at least, the "excess" housing consumption does not seem to reflect occupancy of larger-than-standard apartments; thus, only 15

Table 31

COMPARISON OF COMMUNITY COUNCIL RENT ALLOWANCES WITH REGRESSION ESTIMATES OF
ACTUAL RENT EXPENDITURES: SELECTED FAMILIES, NEW YORK CITY, 1967-1968

Family Composition ^a	Number of Persons	Annual Gross Income	Community Council Rent Allowance	Regression Estimates of Rent Expenditures			
				"Controlled" Tenants		"Uncontrolled" Tenants	
				Manhattan	Non- Manhattan	Manhattan	Non- Manhattan
Retired woman (65), living alone	1	\$ 2,233	\$ 876	\$ 865	\$ 969	\$1,575	\$1,348
Employed woman (45), living alone	1	3,846	876	1,110	1,021	1,697	1,376
Unemployed woman (25), one child (4)	2	3,294	1,037	1,189	1,053	1,802	1,407
Retired man (65) and wife	2	3,550	1,037	868	1,016	1,821	1,464
Man (24) and wife, both employed	2	6,324	1,037	1,413	1,124	2,166	1,567
Man and wife, man employed:							
Man (27), one child (3)	3	5,959	1,209	1,381	1,175	2,238	1,607
Man (30), two children (6, 4)	4	6,805	1,222	1,459	1,274	2,448	1,710
Man (37), two children (13, 8)	4	7,410	1,222	1,382	1,302	2,513	1,746
Man (40), three children (16, 13, 10)	5	8,828	1,227	1,484	1,441	2,765	1,894
Man (40), four children (16, 13, 10, 8)	6	9,568	1,342	1,566	1,541	2,785	1,974
Man (40), five children (16, 13, 10, 8, 6)	7	10,400	1,344	1,630	1,639	2,669	2,033
Man (40), six children (16, 13, 10, 8, 6, 4)	8	11,000	1,349	1,642	1,706	2,346	2,042

SOURCES: Computed from data in Table 27 and Appendix Table C-8.

^a Age of head of household and ages of children are indicated by parenthetical numbers.

percent of all five-person families living in controlled housing occupied apartments larger than the Community Council's standard of five rooms.¹⁵ Presumably, these families of low-to-moderate income must have chosen apartments whose rents were well above the medians for controlled units in sound condition. These choices are less surprising when we reflect that, although the incomes of these large families were characterized by the Community Council as low-to-moderate, they were in fact among the highest incomes reported in 1968 by renter households of five or more persons.¹⁶

Even so, assuming that the Community Council's allowances for nonhousing consumption expenditures were properly scheduled for a low-to-moderate level of living, many families with the indicated incomes must have been depriving themselves of other goods included in that standard of living. In Table 32, we have computed the percentage amount by which each of the illustrative families must have varied its nonhousing consumption expenditures from the Council's standard in order to pay the typical rents shown in Table 31.

For most of those living in controlled housing, the differences are surprisingly small; the exceptions are the employed woman living alone and the young employed couple living in Manhattan. (The latter we have already labelled as an unlikely case; with both husband and wife employed, a gross income of \$6,324 is implausibly low.) For those in uncontrolled housing, however, the differences are quite substantial; the figures in the last two columns indicate that families with low-to-moderate incomes cannot easily afford uncontrolled housing in New York City. Few of them, in fact, occupy such housing; to do so, they must forego much that the Community Council considers necessary or appropriate to that level of living.

How Well Do Rules of Thumb Work?

A traditional rule of thumb used by housing professionals postulates that a family should be able to afford one-fourth of its gross income for housing. As we saw earlier in this chapter, this rule has been incorporated into several Federal programs of housing assistance, as a minimum for Sec. 236 interest-rate subsidies and Title I rent assistance, and (in 1969) as a maximum in Federal public housing. Recently, some housing professionals have proposed that this rule be changed to one-fifth of gross income, the figure used by the State low-rent assistance program for Mitchell-Lama tenants. In Table 33, we examine the effects of these rules of thumb on the budgets of New York City families.

The table shows the gross incomes required by each of twelve families, varying in composition and size, to achieve the Community Council's low-to-moderate level of living, and the gross rent allowances prescribed by the Council. The fourth column expresses these rents as fractions of gross income. These rent/income ratios range from .39 for the retired elderly woman with a gross income of \$2,233 to .12 for a family of eight with a gross income of \$11,000. The reader will recall that these

¹⁵ See Tables 20 and 21 in Ch. V for additional details.

¹⁶ See Table 28, above.

Table 32

COMPARISON OF COMMUNITY COUNCIL ALLOWANCES FOR NONHOUSING EXPENDITURES WITH
REGRESSION ESTIMATES OF ACTUAL NONHOUSING EXPENDITURES:
SELECTED FAMILIES, NEW YORK CITY, 1967-1968

Family Composition ^a	Number of Persons	Community Council		Percent Difference in Nonhousing Consumption ^c		
		Annual Gross Income	Nonhousing Consumption ^b	"Controlled" Tenants		"Uncontrolled" Tenants
				Manhattan	Non- Manhattan	Manhattan
Retired woman (65), living alone	1	\$ 2,233	\$1,357	+1	-7	-52
Employed woman (45), living alone	1	3,846	1,489	-16	-10	-55
Unemployed woman (25), one child (4)	2	3,294	2,257	-7	-1	-34
Retired man (65) and wife	2	3,550	2,513	+7	+1	-31
Man (24) and wife, both employed	2	6,324	2,665	-14	-3	-42
Man and wife, man employed:						
Man (27), one child (3)	3	5,959	3,183	-5	+1	-32
Man (30), two children (6, 4)	4	6,805	3,952	-6	-1	-31
Man (37), two children (13, 8)	4	7,410	4,434	-4	-2	-29
Man (40), three children (16, 13, 10)	5	8,828	5,686	-5	-4	-27
Man (40), four children (16, 13, 10, 8)	6	9,568	6,232	-4	-3	-23
Man (40), five children (16, 13, 10, 8, 6)	7	10,400	7,038	-4	-4	-19
Man (40), six children (16, 13, 10, 8, 6, 4)	8	11,000	7,631	-4	-5	-13

SOURCE: Computed from data in Tables 27 and 31

^a Age of head of household and ages of children are indicated by parentetical numbers.

^b Allowance for goods and services other than housing, excluding work-related expenses.

^c Difference between the typical rent expenditure and the Community Council's rent allowance, expressed as a percentage of the Community Council's allowance for nonhousing consumption (excluding work-related expenses).

Table 33

COMPARISON OF COMMUNITY COUNCIL RENT STANDARDS WITH RULE-OF-THUMB STANDARDS:
SELECTED FAMILIES: NEW YORK CITY, OCTOBER 1967

Family Composition ^a	Number of Persons	Annual Gross Income	Community Council		Rent/Income = .25		Rent/Income = .20	
			Gross Rent	Rent/Income	Gross Rent	Percent Difference, Nonhousing Consumption ^b	Gross Rent	Percent Difference, Nonhousing Consumption ^b
Retired woman (65), living alone	1	\$ 2,233	\$ 876	.392	\$ 558	+23	\$ 447	+32
Employed woman (45), living alone	1	3,846	876	.228	962	-6	769	+7
Unemployed woman (25), one child (4)	2	3,294	1,037	.315	824	+9	659	+17
Retired man (65) and wife	2	3,550	1,037	.292	888	+6	710	+13
Man and wife, both employed	2	6,324	1,037	.164	1,581	-20	1,265	-9
Man and wife, man employed:								
Man (27), one child (3)	3	5,959	1,209	.203	1,490	-9	1,192	+1
Man (30), two children (6, 4)	4	6,805	1,222	.180	1,701	-12	1,361	-4
Man (37), two children (13, 8)	4	7,410	1,222	.165	1,852	-14	1,482	-6
Man (40), three children (16, 13, 10)	5	8,828	1,227	.139	2,207	-17	1,766	-9
Man (40), four children (16, 13, 10, 8)	6	9,568	1,342	.140	2,392	-17	1,914	-9
Man (40), five children (16, 13, 10, 8, 6)	7	10,400	1,344	.129	2,600	-18	2,080	-10
Man (40), six children (16, 13, 10, 8, 6, 4)	8	11,000	1,349	.123	2,750	-18	2,200	-11

SOURCE: Computed from data in Table 27.

^a Age of head of household and ages of children are indicated by parenthetical numbers.

^b Difference between the indicated rent expenditure and the Community Council's rent allowance, expressed as a percentage of the Community Council's allowance for nonhousing consumption (excluding work-related expenses).

gross incomes were chosen to allow for income taxes and work-related expenses where appropriate, and for a low-to-moderate level of nonhousing consumption.

The consequences of applying the traditional rule for housing expenditures—one-fourth of income—to these families are shown in the fifth and sixth columns of the table. The implied rents are above Community Council levels for all households with one or more employed persons; in order to pay such rents, these households would be forced to reduce their consumption of other goods and services to amounts that fall short of Community Council levels by 6 to 20 percent. On the other hand, households with no labor force members would spend less than the Community Council allows for rent; in the extreme case, the retired elderly woman would reduce her rent outlays from \$73 to \$46.50 per month, but would be able to spend 23 percent more on other goods and services than is scheduled by the Community Council.

The last two columns of the table show the consequences of the alternative rule of thumb, that rent expenditures should be 20 percent of gross income. This one is much more in accord with Community Council schedules for households with labor-force participants; only the largest families seem to be faced with substantial reductions in nonhousing consumption. But the implied rent expenditures of those families without labor force members are far too low by Community Council standards.

Clearly, the major reason why these rules of thumb work so poorly is that they are applied to gross income. Families whose incomes derive from employment not only must pay income and other taxes ranging from 14 to 19 percent of gross income, they must also spend \$650 to \$750 per employed member on work-related goods and services. (See Table 27, above.) If a rent/income ratio of, say, .20 leaves these families with enough to cover their needs for other goods and services, it will act very differently on a family with no employed members whose income from pensions, Social Security, etc., is tax-free. To make any kind of budgetary sense, a standard rent/income ratio would have to apply to what is left of income after deduction of major outlays that do not contribute to the family's standard of living.

Even among families whose work-related expenses are assumed to be identical and whose tax rates are nearly the same, the rule-of-thumb approach is insensitive to the differences in budget allocation that should go with differences in family size. According to the Community Council, the employed woman living alone should allow 23 percent of her income for rent; the family of eight with one employed member should allow only 12 percent.

ESTIMATING THE FULL COSTS OF ADEQUATE HOUSING

We have seen that the Community Council's rent allowances were generally adequate to cover controlled rents in 1968 for fully equipped apartments in sound, rent-controlled buildings. However, several studies have indicated that the revenues of many rent-controlled buildings were then inadequate to support reliable building

services, regular maintenance, real estate taxes, and debt service, unless the building owner was willing to forego a competitive return on his equity; indeed, negative cash flows were not uncommon.¹⁷

Elsewhere, we have argued that this situation is rather widespread in the rent-controlled housing inventory, a consequence of rapid inflation in the costs of ownership, not matched by rent increases. Under rent control, average ceiling rents have risen very slowly, and the increases have been erratically distributed within the stock. Even where ceiling rents were adequate, low-income tenants were not always willing or able to pay that much for housing.

If rental revenues are persistently inadequate in relation to costs, it is unlikely that a building owner will continue to maintain his property as though it were a profitable investment. His usual response is to reduce building services and maintenance outlays in order to protect his cash flow. While regulations by the Offices of Rent Control and Code Enforcement may hamper him in this strategy, they are not usually able to block it entirely. The quality of the housing services he provides to his tenants begins to deteriorate toward a level that their rents will support.

It is therefore pertinent to ask what rental allowances would have been needed in 1968 to cover the typical full costs of well-maintained housing meeting the Community Council's standards with respect to kitchen and plumbing facilities and building services. We offer a provisional answer to this question, based on our analysis of the expense records of rent-controlled buildings whose owners applied for "hardship" rent increases in 1966 and 1967. These records are of particular interest not only because they were audited by the Office of Rent Control, but also because there is evidence that the buildings were well maintained. Each was inspected at the time of application and was found to be free of housing code violations; furthermore, the records of the Office of Rent Control show no unresolved tenant complaints about building services or related matters.

From this source, we selected 311 buildings whose annual payrolls were less than \$200 per unit, an amount that generally precludes luxury services such as doormen, elevator operators, or telephone switchboards. Our sample of buildings, described in more detail in Appendix Tables E-3 and E-4, averaged 38 years of age,

¹⁷ The most extensive documentation of income and expenditures for rent-controlled buildings in New York City c. 1968 is contained in *The Urban Housing Dilemma*, a report prepared by George Sternlieb for the City's Department of Rent and Housing Maintenance, a draft of which was released in May 1970. From his analysis of detailed income and expense data for at least 1 year, obtained from the owners of some 664 rent-controlled buildings, Dr. Sternlieb concludes that "The economics of much of the rent-controlled housing stock currently do not justify private investment. . . . Current operating yields are substantially below alternative investment yields. . . . A substantial part of the stock is no longer mortgageable. . . . Among owners there is a pervasive crisis of confidence. . . . Inflation, with limited rent rolls, has particularly impacted repairs and maintenance." ("Principal Findings," p. 47.)

Our own studies agree. Some of our findings were summarized in Vol. I of this series (Ira S. Lowry, ed., *Confronting the Crisis*, RM-6190-NYC, The New York City—Rand Institute, February 1970). The effects of inflation on maintenance and operating costs are documented by C. Peter Rydell in *Factors Affecting Maintenance and Operating Costs in Federal Public Housing Projects*, R-634-NYC, The New York City—Rand Institute, December 1970. The following discussion of "full costs" draws on work now in progress at the Institute.

56 units per building, and 3.5 rooms per unit;¹⁸ the buildings were well distributed among all boroughs except Richmond, where rent-controlled multiple dwellings are scarce. Thus, they seem in most respects to fit the Council's conception of moderate-but-adequate housing, and are fairly representative of the City's inventory of sound, fully equipped, rent-controlled apartments.

Assessed values of these properties averaged about \$5,200 per unit, implying an average market value of about \$7,650.¹⁹ When the owners applied to the Office of Rent Control for relief, the average contract rent was \$1,032 per year, equivalent to about \$1,160 in gross rent. As shown in Table 30, the median gross rent of "sound" controlled apartments in 1968 was \$1,067 for three rooms and \$1,128 for four rooms.

For these 311 buildings, annual out-of-pocket costs for operations and maintenance averaged \$425 per unit. Real estate taxes averaged about \$255 per unit. Allowing 8 percent of average market value to cover depreciation, debt service, and return on equity—a reasonably competitive rate of return in 1967—adds another \$610, for a total of \$1,290 per unit per year, the annual contract rent needed to support the average unit of 3.5 rooms.

To approximate the equivalent gross rent, we must add another \$130 annually for tenant-paid gas and electricity, bringing the total to \$1,420. This figure is 133 percent of the median gross rent cited for three rooms (\$1,067) and 126 percent of the median cited for four rooms (\$1,128). Thus, our cost analysis indicates that the median controlled rents in 1968 of apartments then in sound condition were far from adequate to cover the typical costs of supplying well-maintained housing over the long run. To put the case another way, an owner who spent the average amount on operations, maintenance, and real estate taxes would have found himself left with about \$290 per unit per year to cover depreciation, debt service, and return on equity—about 3.8 percent of market value. He would need a mortgage on very favorable terms indeed to make his own investment rewarding.

Since most buildings contain apartments of assorted sizes, and since few of the owner's costs can be unequivocally assigned to particular units within his building, the variation of costs with apartment size can only be estimated by comparing costs for buildings whose average apartment sizes differ. For maintenance and operating costs, we have made such estimates, using multiple regression analysis to distinguish the effect of variation in average rooms per unit from the effects of variations in other building characteristics such as number of units, structural type, or age.

Some tentative conclusions from this analysis are given in Table 34, the first six columns of which show elements of annual cost in 1966-1967 for apartments of two to six rooms in a typical building of 56 units, built in 1928. (The final row of the table shows average cost per unit for the 311-building sample, as discussed above.)

¹⁸ See Appendix Tables E-3 and E-4 for additional details. To simplify the accounting and computations in Appendix E, data on these buildings are presented there with greater precision than in Table 34 and the discussion below.

¹⁹ Both our own comparisons of purchase prices with assessed values on 145 of these buildings and studies by the State Board of Equalization indicate that multiple dwellings in New York City are typically assessed at 65 to 70 percent of their market values. See Appendix E for additional details.

Table 34

**ESTIMATES OF CONTRACT AND GROSS RENTS NEEDED TO COVER FULL COSTS OF HOUSING MEETING
COMMUNITY COUNCIL STANDARDS, BY SIZE OF UNIT: NEW YORK CITY, 1966-1967**

Number of Rooms	Annual Cost per Unit for Typical, Well-Maintained Building ^a in 1966-1967						Equivalent Monthly Rents	
	Operations and Maintenance ^b	Real Estate Taxes ^c	Return on Capital ^d	Total Cost to Owner	Gas and Electricity ^e	Total Cost to Tenant	Contract Rent	Gross Rent
2	\$350	\$210	\$500	\$1,060	\$105	\$1,165	\$ 88	\$ 97
3	400	240	575	1,210	120	1,330	101	111
4	450	265	645	1,360	135	1,495	113	125
5	500	295	715	1,510	150	1,660	126	138
6	550	325	785	1,660	165	1,825	138	152
3.5 ^f	425	255	610	1,290	130	1,420	108	118

SOURCE: Analysis by NYCRI of data provided by the Office of Rent Control, HDA. See Appendix Table E-6.

NOTE: Estimates are based on audited expenses for 311 rent-controlled buildings whose owners applied for "hardship" rent increases in 1966 and 1967. "Luxury buildings" (payroll expenses in excess of \$200 per unit) were excluded. Except for monthly rents, estimates are rounded to the nearest \$5; therefore, distributions may not add exactly to totals.

^a Structure containing 56 apartments, built in 1928, and free of housing code violations.

^b Heating fuel, utilities, payroll, management, repairs and maintenance, replacements and improvements (amortized), insurance, and miscellaneous expenses.

^c Average tax on 3.5-room unit, varied by size of unit in proportion to direct operating and maintenance costs.

^d Assumes 8 percent on the average market value of \$7,650, varied by size of unit in proportion to direct operating and maintenance costs.

^e Based on typical cost per month of \$6.56 + \$1.19 per room. See Appendix C.

^f Average unit size for 311 buildings.

Our regression analysis indicates that, for such a building, operating and maintenance costs for a two-room apartment typically amounted to about \$350 annually, rising by \$50 for each additional room.

Both real estate taxes and the allowance for return on capital are based on the market value of the property as a whole, and must be allocated among individual units. For the average apartment of 3.5 rooms, these cost elements amounted to \$255 and \$610, respectively; in Table 34, we varied these amounts for larger or smaller apartments in proportion to the variation of direct operating and maintenance costs by unit size.²⁰

Scheduled in this fashion, operating and maintenance costs, real estate taxes, and the allowance of 8 percent on market value to cover depreciation, debt service, and return on equity total \$1,060 for a two-room apartment, increasing to \$1,660 for six rooms. Roughly speaking, these amounts would be the annual contract rent needed to cover full costs. Adding an allowance for tenant-paid gas and electricity, we estimate that corresponding annual gross rents would range from \$1,165 to \$1,825. The last two columns of the table show the monthly equivalents of these figures. The monthly gross rents implied by our calculations begin at \$97 for two rooms; \$14 must be added for each additional room.

The reader is reminded that the computations shown in Table 34 are illustrative rather than definitive. They assume a building of a particular type, size, and age, containing apartments of various sizes. Our data show that the components of the cost of supplying rental housing vary not only with rooms per unit, but with structural type and size of building, and especially with building age. Buildings containing mostly small apartments are likely to differ in these respects from buildings containing mostly large apartments.

Thus it is with reservations that we present Table 35, comparing our "full-cost" gross rents from Table 34 with the median gross rents of controlled apartments in sound buildings shown earlier in Table 30. But our illustrative full costs would have to be quite wide of the mark to blur the message: They are all well above the median rents current in 1968.

We cannot further pursue the analysis of housing costs here without preempting the burden of future publications in this series. The findings summarized above, however, testify that, while the Community Council's rent allowances may have been generally adequate to cover controlled rents on "sound" apartments in 1968, that situation could not long endure. Given fixed rent ceilings, the quality of the housing would necessarily be affected by the owner's inability to provide adequate maintenance and still salvage a competitive return on his investment.²¹

²⁰ See Appendix E for a justification of this allocation rule.

²¹ These considerations led the City Council to revise the rent control law in 1970. Under Local Law 30, the Office of Rent Control is to determine a "Maximum Base Rent" for each rent-controlled apartment as of 1 January 1972, an amount adequate to cover standard maintenance and operating costs, real estate taxes, and a return of 8.5 percent on equalized assessed value. Beginning in 1972, ceiling rents of occupied apartments will be increased at a rate not to exceed 7.5 percent annually, until they reach Maximum Base Rents. The Maximum Base Rents are also to be revised biennially to reflect increases or decreases in standard costs for maintenance and operations, changes in real estate tax liability due to reassessment or changing tax rates, and changes in equalized assessed value, the base on which the 8.5 percent "fair return" is computed.

Table 35

COMPARISON OF MEDIAN GROSS RENTS WITH FULL COSTS, BY SIZE OF UNIT:
WELL-MAINTAINED CONTROLLED HOUSING, NEW YORK CITY, 1966-1968

Number of Rooms	Monthly Gross Rent		Ratio of "Full Cost" to Median
	1968 Median, Controlled Units in Sound Buildings	1966-1967 "Full-Cost" Typical Well-Maintained Building	
2	\$ 83	\$ 97	1.17
3	89	111	1.25
4	94	125	1.33
5	98	138	1.41
6	110	152	1.38

SOURCES: Tables 30 and 33.

DETERMINING ABILITY-TO-PAY: A "DISPOSABLE INCOME" CRITERION

We have shown that existing programs of housing assistance have failed to develop consistently logical criteria for distinguishing those who need help with their housing expenses from those who do not. We have also shown that conventional rules of thumb intended for this purpose yield illogical and inequitable results when applied to a plausible variety of family circumstances.

It is easier to demonstrate the defects and inequities in existing standards for housing assistance than it is to formulate an administratively practical alternative whose logic rests on scientific analysis. Nonetheless, we feel obliged to do the best we can to provide such an alternative for the reader's evaluation. In this section, we propose a criterion for deciding whether or not a household needs assistance with its housing costs. It rests in part on objective data and in part on explicitly noted value-judgments.

We argue that most of the demonstrable inequities of existing program standards and conventional rules of thumb can be avoided by a standard expressed in terms of disposable income (i.e., gross income minus taxes, involuntary insurance, and work-related expenses), the amount varying with family size.²² Our preference for this formulation of the standard rests on analytical grounds; value-judgments come into play in the choice of the dollar level of disposable income appropriate for a family of given size.

We accept the judgment of the Community Council of Greater New York that families unable to afford its low-to-moderate standard of living have a claim on public concern. Others may reject this standard as either too high or too low; we hope

²² "Disposable income" is usually defined as gross income minus income taxes and involuntary insurance premiums; we also deduct work-related expenses. Perhaps we should therefore choose a new name for our construct, but "disposable income" seems so appropriate that we have decided to risk confusing the casual reader.

they will do so only after examining the quantity and quality of goods and services included by the Council. By modifying the Community Council's budgets, we develop in this section our own schedule of disposable incomes needed to support families of various sizes at a low-to-moderate standard of living. We argue that families whose disposable incomes are lower than those of comparable families in our schedule should be eligible for some form of rent assistance.

The specification of a low-to-moderate level of housing consumption—or to put it differently, the level of housing consumption that is worthy of public support—is, of course, critical to our analysis. In general, we accept the minimum housing standards set by the American Public Health Association with respect to space requirements, basic equipment and facilities, structural requirements, safety, sanitation, and access to community facilities. In our judgment, APHA standards would be met by almost any apartment in a multiple dwelling that meets the City's code standards for family occupancy, except that the City code allows higher occupant densities than does APHA.

As interpreted by the Community Council, the APHA density standard works out to one room plus one room per person for most households of one to four persons; peculiar configurations of age and sex within the household may require an extra bedroom.²³ For households of five or more persons, the greater variety of possible age/sex mixtures makes it more difficult to generalize about the minimum apartment size needed to meet APHA standards. The Community Council's housing budget computations provide five rooms for either four or five persons and six rooms for six, seven, or eight persons, with contract rent allowances varying strictly with room count. We have followed the same general pattern, but have increased the contract rent allowance slightly for each additional person to allow the larger family a wider range of choice than the smaller family.

While we found the Council's housing cost estimates appropriate to the context in which they were made, our investigations into the costs of supplying rental housing indicated that ceiling rents current in 1967-1968 on controlled housing units then in sound condition were generally inadequate to support the necessary level of maintenance expenditures needed to keep them in sound condition over the long run. We have, therefore, substituted our own estimates of the contract and gross rents needed at that time to cover the full costs of a low-to-moderate level of housing consumption.

For nonhousing expenses, we have accepted as reasonable and adequate the Community Council's specification of consumption items appropriate to a low-to-moderate standard of living for families of various sizes, and its estimates of the annual costs of these items. In addition to varying these allowances by family size, the Council varies nonhousing consumption allowances with the ages of dependent children, allowing less than \$500 for a child under 6 years of age, up to \$1,150 for a child between the ages of 16 and 19 years. However, for the sake of simplicity both in analysis and in possible administrative applications of our standard, we have not

²³ We remind the reader that bathrooms, hallways, closets, etc., are excluded from the room count; kitchenettes and dining alcoves are counted as half-rooms; and a full-sized dining room may double as a child's bedroom. See Table 29, above.

allowed these variations; implicitly, our budget for large families assumes that the children are under 12 years of age, requiring less in the way of clothing, transportation, school supplies and entertainment than do older children.²⁴

Table 36 shows the budgets that result from our adjustments; the first three columns itemize our low-to-moderate nonwork-related consumption budgets for 1967-1968 for households of one to eight persons. While no simple schedule can do full justice to all the possible complexities of household composition and consumption requirements, we think that these budgets would have enabled nearly all households to achieve a reasonable approximation to the Community Council's low-to-moderate standard of living at prices current in 1967-1968, including the full cost (rather than the ceiling rent) of well-maintained apartments large enough to accommodate the occupants without overcrowding.

For households with no members in the labor force, whose incomes were derived entirely from nontaxable transfer payments, the gross incomes required are identical with the disposable incomes shown in the third column. For self-supporting households, additional allowances must be made for work-related expenses, income taxes, and involuntary insurance. In the fourth and fifth columns, we estimate these items for families with one earner, showing in the last column the gross income required to yield the appropriate disposable income for each size of family. With more than one labor force participant, larger allowances for work-related expenses and involuntary insurance would be appropriate.

With that reservation, these gross incomes may be compared with those shown in Table 25, above, as maxima for admission to various housing assistance programs. Our low-to-moderate gross incomes are, not surprisingly, well below admission limits for limited-profit (Mitchell-Lama), limited-dividend, and redevelopment company housing. They are also well below the admission limits set by the State low-rent assistance program and the two Federal interest-rate subsidy programs.

On the other hand, our low-to-moderate gross incomes are well above welfare allowances for families of corresponding size ("Public assistance," Table 25). Our estimates of disposable income needed are obviously more appropriate figures for this comparison; even these run considerably above welfare allowances.

For the public housing programs, the comparison yields mixed results. Our low-to-moderate gross incomes tend to be lower than public housing admission limits for small families and higher than public housing admission limits for large families. (Note, however, that admission limits for Federal, State, and City public housing programs vary greatly for families of a given size.)

It is interesting to note that although we derived our budgets without reference to current programs, our low-to-moderate gross income criteria almost exactly

²⁴ In administrative applications, it might be appropriate to exclude the earnings of minor children living at home from the computation of family income, a step which would offset the downward bias of our budgets for families with older children. It does not seem unreasonable to suppose that teen-age children are capable of earning enough to cover their own marginal costs while living at home. This assumption is made by at least one public program, the Federal Rent Supplements program. (See footnote 25, below.)

Table 36

DISPOSABLE AND GROSS INCOMES REQUIRED TO SUPPORT A LOW-TO-MODERATE
STANDARD OF LIVING, BY HOUSEHOLD SIZE: NEW YORK CITY, 1967-1968

Number of Persons	Consumption Budget			Households Supported by One Earner		
	Gross Rent ^a	Other Goods and Services ^b	Disposable Income Required	Work- Related Expenses	Taxes and Involuntary Insurance ^c	Gross Income Required
1	\$1,200	\$1,400	\$2,600	\$750	\$ 850	\$ 4,200
2	1,350	2,400	3,750	650	900	5,300
3	1,500	3,200	4,700	650	1,000	6,350
4	1,600	4,000	5,600	650	1,150	7,400
5	1,700	4,800	6,500	650	1,200	8,350
6	1,800	5,600	7,400	650	1,300	9,350
7	1,850	6,400	8,250	650	1,350	10,250
8	1,900	7,200	9,100	650	1,450	11,200

SOURCES: Table 34 (gross rents) and Table 27, with additional computations based on data from Community Council of Greater New York, *Annual Price Survey, Family Budget Costs, October 1967*, Eleventh Edition, 1968.

NOTE: All estimates have been rounded to the nearest \$50.

^a Estimated full cost of well-maintained pre-1946 apartments of appropriate size; amounts are substantially higher than typical ceiling rents in 1968.

^b Based on Community Council estimates for typical family composition; may understate requirements of families with several teen-age children.

^c Assumes joint income tax return for households of two or more persons.

match the 1969 admission limits to the Federal rent supplements program in New York noted in Table 25:

Gross Income Criterion

Number of Persons	Federal Rent Supplements	Low-to- Moderate
1	\$4,540	\$ 4,200
4	7,310	7,400
7	9,450	10,250

Moreover, this program, which requires tenants to pay rents equal to 25 percent of adjusted gross income,²⁵ results in a division of disposable income between rent and nonrent expenditures for typical families of each size that is fairly close to that shown in our budgets for comparable families (Table 36); the point is illustrated by

²⁵ The following deductions from gross income are allowed in determining eligibility and in calculating tenant rent payments: (a) 5 percent of gross income for Social Security taxes, union dues, etc.; (b) \$300 for each minor child; (c) all earnings of minor children. See Appendix Table E-1 for details. Note also that the schedule of maximum incomes is less detailed with respect to family size than our schedule; there is a single limit for families of three and four persons, and a single limit for families of five or more persons.

a comparison of the rent contributions required of families under the Federal program with our allowances:

Gross Rent Criterion

Number of Persons	Federal Rent Supplements	Low-to- Moderate
1	\$1,080	\$1,200
4	1,590	1,600
7	1,875	1,850

The schedule of gross rents and incomes in Table 36 was developed without preconceptions about appropriate rent/income ratios for families with low-to-moderate incomes. We can, however, calculate such ratios from the data presented there, with the results shown in Table 37 under alternative assumptions about the source of income. For households whose incomes are derived from transfer payments, we calculate rent/income ratios using disposable income as the denominator. For comparable households supported by the earnings of an employed member, the denominator is the gross income that would produce equivalent disposable income. The difference between disposable and gross income, of course, is the allowance for work-related expenses and tax liabilities of families supported by an employed member; both types of household are left with the same amount to spend on consumption.

These calculations reinforce our earlier discussion of the inequities that result from applying a rent/income rule to gross household income without regard for the source of income: the ratios for households living on nontaxable transfer payments are much higher than those for families supported by employment even

Table 37

RENT/INCOME RATIOS FOR A LOW-TO-MODERATE STANDARD OF LIVING
BY SOURCE OF INCOME, BY SIZE OF HOUSEHOLD:
NEW YORK CITY, 1967-1968

Number of Persons	Gross Rent Allowance	Households Supported by Transfer Payments		Households Supported by One Earner	
		Disposable Income	Rent/Income Ratio	Gross Income	Rent/Income Ratio
1	\$1,200	\$2,600	.46	\$ 4,200	.29
2	1,350	3,750	.36	5,300	.25
3	1,500	4,700	.32	6,350	.24
4	1,600	5,600	.29	7,400	.22
5	1,700	6,500	.26	8,350	.20
6	1,800	7,400	.24	9,350	.19
7	1,850	8,250	.22	10,250	.18
8	1,900	9,100	.21	11,200	.17

SOURCE: Computed from data in Table 36.

though the disposable incomes—the amounts available for nonwork-related consumption—are the same. Furthermore, it is evident from Table 37 that rent/income ratios should vary more with household size than they do in most of the programs of housing assistance shown in Table 25. Whether these ratios are based on gross or disposable income, they are much higher for small households than for large ones.

We should remind the reader that the rent/income ratios shown in Table 37 are applicable only to households with the incomes indicated there. They are the result, not the premise, of our attempt to determine the levels of income below which New York City's households need some form of public aid to enable them to secure a low-to-moderate standard of living. The next chapter will examine the situation of those whose incomes were below this level in 1968, and will propose a formula for rent assistance.

SUMMARY

The purpose of this chapter is to find a satisfactory means of distinguishing households in need of rent assistance from those that can afford adequate housing without assistance. As the preceding sections show, this is not an easy task. It requires judgments about the general levels of living below which households should be described as "needy" and judgments about the specific levels of housing consumption (space and quality) that are worthy of public support. It also requires estimates of the costs of these levels of living, including housing, for households of various sizes and types.

Existing programs of housing assistance set maximum incomes for participation and establish minimum tenant contributions toward the cost of the housing offered by the program, usually in the form of minimum rent/income ratios. These programs vary widely in the quality of housing offered, in maximum incomes for participation, and in the proportions of full cost contributed by the tenants. The differences among programs no doubt reflect a variety of program purposes as well as differing judgments of need by various legislative bodies; in any case, we are unable to discern a logical pattern among these programs with respect to the relationship between tenant rent-payments and tenant incomes.

Ability to pay for housing is often determined by traditional rules of thumb in the form of maximum rent/income ratios, the most hallowed of which is that a family can afford to pay a fourth of its gross income for housing. We show that this simple rule is strikingly inequitable in its impact on family budgets because it takes no account of large variations in disposable income among families of different sizes and among families whose incomes come from different sources, variations due to the structure of income tax laws and to the work-related expenses of employed family members. Thus, a given gross income leaves much less disposable income for a couple living on the taxable earnings of the husband than for a retired couple living on nontaxable pensions or Social Security. Clearly, ability to pay for housing is better measured on the basis of disposable income (gross income minus taxes and

work-related expenses) than on the basis of gross income; among households with a given disposable income, ability to pay for housing also varies with family size, for obvious reasons.

We based our estimates of incomes needed to support various-sized families on budget studies conducted by the Community Council of Greater New York, studies which establish the costs in 1967-1968 of a low-to-moderate standard of living for families of various sizes and compositions. We accepted the Council's standards of space and quality for housing consumption, and found that while the Council's estimates of the cost of apartments meeting its standards were generally adequate to cover ceiling rents on controlled apartments in sound condition in 1968, these rents were inadequate to cover the full costs of such apartments over the long run.

Consequently, we combined the Community Council's estimate of the costs of low-to-moderate levels of *nonhousing consumption* with our own estimates of the typical full costs of low-to-moderate levels of *housing consumption* to obtain *total nonwork-related consumption* budgets covering a low-to-moderate level of living for families living in New York City in 1967-1968. As summarized in the table below, these consumption budgets vary from \$2,600 for a single person living alone to \$9,100 for a family of eight; adding tax liabilities and work-related expenses (assuming that all income was from employment of one household member), the equivalent gross incomes range from \$4,200 for a single person to \$11,200 for a family of eight. For families living on nontaxable transfer payments, gross incomes equal to the indicated consumption budgets would, of course, have been adequate.

The last two columns of the table show the rent/income ratios implied by our low-to-moderate consumption budgets, based alternatively on disposable and gross incomes. If the conventional gross rent/gross income standard were applied to all households, it would clearly discriminate against those supported by current earnings in favor of those living on nontaxable transfer payments; thus our preference

Number of Persons	Low-to-Moderate Consumption Budget			Equivalent Earned Gross Income ^b	Rent/Income Ratios	
	Gross Rent	Other Consumption ^a	Total (Disposable Income)		Gross Rent/ Disposable Income	Gross Rent/ Gross Income
1	\$1,200	\$1,400	\$2,600	\$ 4,200	.46	.29
2	1,350	2,400	3,750	5,300	.36	.25
3	1,500	3,200	4,700	6,350	.32	.24
4	1,600	4,000	5,600	7,400	.29	.22
5	1,700	4,800	6,500	8,350	.26	.20
6	1,800	5,600	7,400	9,350	.24	.19
7	1,850	6,400	8,250	10,250	.22	.18
8	1,900	7,200	9,100	11,200	.21	.17

^a Food, clothing, medical care, household furnishings, recreation, etc. Does not include work-related expenses.

^b Includes income taxes, involuntary insurance, and work-related expenses for one employed household member.

for a “disposable income” criterion for distinguishing families in need of rent assistance.

Our basic conclusion is that disposable incomes equal to the consumption budgets shown above for each size of household offer an equitable and reasonable criterion for distinguishing households that need rent assistance from those that do not. We should remind the reader that many of the City’s families already receive rent assistance—in some instances, such as public housing tenants or welfare clients, in the form of visible contributions from the public treasury; in other instances, such as tenants of controlled housing, in the form of ceiling rents that are below long-run supply costs. In the following chapter, we suggest a formula for rent assistance that avoids many of the inequities inherent in present programs, targeting this assistance only where it is needed.

VII. AN APPROACH TO RENT ASSISTANCE

In Ch. VI, we developed a "disposable income" criterion for distinguishing families who need rent assistance in order to pay the full costs of well-maintained housing without reducing their other consumption below the Community Council's low-to-moderate level of living. In this chapter we go further, distinguishing rent assistance from general income maintenance and examining alternative formulas for determining *how much rent assistance* should be granted to those in need. We show how three such formulas, as applied in Federal housing assistance programs, allocate housing costs between tenants and the public treasury and how the results are affected by differences in the full costs of the housing provided.

Defects in the structure and coverage of existing housing assistance programs lead us to suggest five principles that should govern the design of a comprehensive rent assistance program. We present for the reader's consideration a pattern of rent assistance that is consistent with these principles, illustrating its impact on the budgets of assisted families of various sizes and levels of income. Finally, we generalize this pattern into an explicit formula for rent assistance, one that seems to us more sensitive to differences in family circumstances than those now in use and thus more efficient in targeting assistance only where it is needed to meet the objectives of housing policy.¹

RENT ASSISTANCE VS. INCOME MAINTENANCE

A proposal to assist low-income families with their housing costs implies redistribution of income through taxation and spending by government. Some would hold that, even though the poor are badly housed, no valid public purpose is served

¹ Although the method by which housing assistance should be delivered in a program of this scope is a matter of considerable importance, we do not discuss it in this volume; elsewhere, we have proposed the use of rent certificates delivered directly to the assisted family as the most feasible method of administering a large-scale assistance program which presumes that the assisted families will be housed in the existing inventory of private rental housing. See *Rental Housing in New York City*, Vol. I, *Confronting the Crisis*, edited by Ira S. Lowry, RM-6190-NYC, The New York City-Rand Institute, February 1970, pp. 31-32.

by helping them at the expense of the more affluent. Others would maintain that the housing problems of the poor are not all that serious, and more pressing claims on public funds ought first to be satisfied. If such objections are based on adequate information about the housing conditions and budgetary problems of low-income families, they reflect value premises not easily altered by argument.

Even those who believe that income redistribution is a legitimate function of government, and that the housing problems of the poor are serious enough to warrant the use of this device for relieving them, may still reasonably balk at the concept of special housing assistance. Given that low-income families are unable to afford both adequate housing and adequate amounts of other goods and services, why focus on the housing part of their budgetary problem? Instead of rent assistance, why not unrestricted cash grants to be allocated between housing and other consumption according to the priorities of the recipient? Who knows better than the consumer himself how to get the most satisfaction from a budget supplement?

In fact, this is the Federal position on welfare assistance administered through State and local agencies. Federal funds cannot be used for any program that does not permit the recipient to choose how to spend his welfare allowance, even though the total amount of the allowance may have been calculated by the granting agency so as to cover the cost of some specific assortment of goods and services. On the other hand, the Federal government also funds subsidies-in-kind, including several programs of housing assistance, targeted on families who are not destitute but whose incomes are below the national average. (See Table 25 in Ch. VI.) The same could be said of New York State and New York City.

The operative principle seems to be a willingness on the part of our legislatures to provide unrestricted cash grants only to the destitute and in amounts that are barely adequate for subsistence. For those better off, our governments seem prepared to subsidize only selected kinds of consumption in which there is presumably a special public interest, either because they benefit the consumer himself in ways beyond his perception, or because his increased consumption of these items also benefits his neighbors. Education is one example of such consumption; housing is another.

The argument that housing is a commodity whose consumption entails benefits either not perceived by or not captured by the consumer is intrinsically difficult to evaluate. Scientific evidence for the existence of such benefits is not terribly persuasive one way or the other.² In the absence of a strong scientific argument, we can only rely on the collective wisdom of the community. In short, special incentives for housing consumption, funded out of the public treasury, are appropriate if the community says they are and no solid scientific argument to the contrary can be found.

We therefore distinguish between a policy of income maintenance for the very poor, for whom rent assistance alone would be at best a partial relief from budgetary stringency; and a policy of specific rent assistance for those already in

² See "Minimum Housing Standards" in Appendix E for a discussion of the evidence and citations to the literature.

possession of a bare living whose housing consumption is below a socially desirable level. In this chapter, we must deal with both situations, but our attention goes mostly to the second realm of policy, where precedents are less clear.

The nearest thing to a public consensus on the issue of *minimum* standards of living is the schedule of welfare allowances governing payments by the Department of Social Services (DSS) to individuals and families who are, for various reasons, unable to support themselves. The public treasury makes up the difference between private income (earnings, pensions, unemployment insurance, etc.) and the DSS subsistence budget for the individual or family in question. This budget includes the contract rent of the housing occupied by the welfare recipient plus standard allowances for other consumption items; from time to time, special grants are made to cover extraordinary expenses.

Table 38 shows the median values of these allowances for rent-paying welfare households of each size in mid-1969. The same values would be roughly appropriate for 1967-1968.³ The gross and disposable incomes necessary to support a low-to-moderate standard of living in 1967-1968 are also shown in the table; these are repeated from Table 36 in Ch. VI.

As Table 38 shows, there is a substantial gap between the welfare standard and the low-to-moderate standard for each household size. Except for households of eight or more persons, low-to-moderate disposable incomes are from 155 to 166 percent of the corresponding welfare allowance. We argue that these standards roughly delimit the boundaries of rent assistance policy, if such a policy is to be distinguished at all from a general income-maintenance policy.

The lower boundary is the level of the welfare allowance. Families whose disposable incomes from private sources fall below this level need basic budgetary assistance of the kind offered by DSS. To be sure, not all such families now receive aid from DSS; some are ineligible (due to program requirements that one may view as good or bad); some, through ignorance or pride, do not apply. But to remedy these shortcomings (if they are such) of the public assistance program with a housing program imposes, we think, an unnecessary and illogical strain on the administrative process.

Above the welfare allowance level, rent assistance may be offered to enable families to achieve a level of housing consumption that they would not otherwise find feasible or desirable. The upper boundary of rent assistance policy is that level of income above which families are, without special intervention by government, willing and able to pay the full costs of decent, safe, and sanitary housing. As noted earlier, we think that our low-to-moderate disposable income criterion fits this description, delimiting the upper boundary above which rent assistance is not needed to achieve the goals of housing policy.

³ In 1969 the formula for determining welfare allowances for items other than rent was simplified by eliminating variations associated with the ages of dependent children, but the average level of assistance for a family of given size was not, so far as we can tell, substantially changed from the schedule in effect in 1967 and 1968. Since the Consumer Price Index for New York City rose about 10 percent between October 1967 (reference date of the Community Council's Annual Price Survey) and July 1969, the purchasing power of the typical welfare budget must have declined during that period.

Table 38

COMPARISON OF MEDIAN WELFARE ALLOWANCE AND LOW-TO-MODERATE
INCOME BY HOUSEHOLD SIZE: NEW YORK CITY, 1967-1968

Persons per Household	Median Welfare Allowance ^a	Low-Moderate Level of Living		
		Gross Income ^b	Disposable Income	
			Amount ^c	Percent of Welfare Allowance
1	\$1,670	\$ 4,200	\$2,600	156
2	2,260	5,300	3,750	166
3	2,860	6,350	4,700	164
4	3,500	7,400	5,600	160
5	4,140	8,350	6,500	157
6	4,740	9,350	7,400	156
7	5,330	10,250	8,250	155
8	6,460	11,200	9,100	141

SOURCES: Table 36 and unpublished tabulations of records of the Department of Social Services, Human Resources Administration, prepared by the Bureau of the Budget.

^a Based on data for welfare households (not cases) paying cash rent on 1 July 1969. Medians computed by linear interpolation within \$500 intervals.

^b Gross income required in 1967-1968 to yield the indicated disposable income after income taxes, involuntary insurance, and work-related expenses. Assumes one employed person per household.

^c Community Council's low-to-moderate consumption budget, adjusted by NYCRI to reflect larger housing expenditures for households of four or more persons, and the full cost of well-maintained older housing.

As we have indicated, these boundaries are not immutable, nor can they be fixed by strictly scientific analysis. They seem to us to be a reasonable approximation to public consensus. The analysis that follows makes use of these boundaries but is not conceptually dependent on the precise boundaries chosen; it could be applied, with analogous results, to other boundary-sets.

The problem addressed by this analysis is the following: *Between income levels that require 100 percent rent assistance and income levels that require no rent assistance, what rent assistance formula should apply?*

ALTERNATIVE FORMULAS FOR RENT ASSISTANCE

We find precedents for three general formulas for rent assistance. They are worth examining here in some detail because their implications for the budgets of assisted families are not really manifest in the formulas themselves and have not to our knowledge been adequately explored elsewhere. A comparison of these alternatives offers valuable guidance for program design in the context of New York City's current rental housing problems.

Rent-Splitting Formulas. The most widely used formula for rent assistance is one which divides the full cost of rental housing between the public treasury and the tenant in proportions that do not vary with the income of the tenant. This type of formula has been used by the Federal, State, and City public housing programs in New York City since their inception. It is also the principle underlying the several middle-income housing programs operating in New York City, of which the most important is the Mitchell-Lama program.

The Federal public housing program is a good example for closer scrutiny. The local housing authority builds and operates housing financed by its own tax-exempt bond issues and exempt from local real estate taxes. The Federal government contributes annually a sum that covers debt service on the bonds. The local authority designs a schedule of rentals adequate to cover current operating costs plus a small payment to the local government in lieu of taxes. These rents vary among apartments within each project, reflecting differences in apartment size. Overall, the Federal grant and the value of real estate tax exemption usually amount to about half the full cost of supplying the housing. The tenants pay the rest.⁴

From the public viewpoint, this formula has some obvious advantages. The magnitude of the public commitment is well-defined at the inception of a project and, except for possible changes in the implicit costs of tax exemption, is fixed over the life of the project. Fiscal administration is simplified by charging equal rents for equal accommodations without reference to the tenant's income or to its changes over time.

For the tenant, the housing bargain is substantial, and roughly proportional to the amount of space he occupies. In essence, he gets a discount on the market rental value, the same rate of discount applying to all tenants. The tenant's fiscal commitments, however, are not as predictable as those of the Federal treasury; when operating costs rise, rents must be increased to cover them, just as in the private rental market.

The principle of splitting the rent can be applied to arrangements other than direct public ownership. Under the Housing and Urban Development Act of 1965, local housing authorities are encouraged to lease privately owned housing for sublease at public housing rents to tenants eligible for admission to public housing. The Federal treasury contributes the difference between the rental paid by the local housing authority to the owner and the rental received from the tenant. A small program of this type is operated in New York City.

Fixed-Percent-of-Income Formulas. Another approach is to fix the tenant's payment as a percentage of his income; this requires that the public subsidy vary with the cost of the housing provided and with the income of the tenant assisted. Formulas of this type are currently used in New York City by the State program

⁴ A 1969 amendment to the Federal public housing law (United States Housing Act of 1937, Sec. 10) is the first important deviation from this formula. It provides for an additional Federal contribution to the rents of individual apartments where needed to prevent the tenant from paying more than 25 percent of his income for rent. There was already provision for an additional Federal contribution on behalf of elderly persons.

of rent assistance to low-income tenants of Mitchell-Lama housing, and by two Federal programs, one offering interest subsidies and the other offering rent supplements to private developers of new or rehabilitated rental housing.⁵

The Federal rent supplements program is a good example of the fixed-percent-of-income formula. The Department of Housing and Urban Development (HUD) contracts with landlords to make annual payments on behalf of qualified tenants, payments equal to the difference between the negotiated "fair market rental" of specified apartments and 25 percent of the tenant's adjusted gross income. In other words, the tenant pays 25 percent of his income to the landlord and the Federal treasury makes up the difference between that amount and the market rent. There is a limitation: The tenant's payment must cover at least 30 percent of the market rent.

Under this arrangement, the public liability is limited to 70 percent of the market rent, a ceiling which may shift over time as operating costs or market conditions change and as "fair market rentals" are renegotiated with the landlord. Within that limit, the public contribution will vary with the incomes of the participating tenants, which must therefore be monitored after admission. The tenant is thus sheltered from changes in the market rent of the unit he occupies; he is also partially sheltered from the effects of changes in his own income, since his rental liability rises and falls proportionally with income changes. If his income rises to four times the market rent, he ceases to benefit from the program without the awkward necessity of changing his residence.

Sliding-Percent-of-Income Formulas. A third approach is to relate the tenant's share of his housing costs directly to his income by a sliding scale such that the percentage of income contributed by lower-income tenants is less than the percentage of income contributed by higher-income tenants. The public contribution covers the difference between the tenant's payment and the full cost of the housing occupied. A version of this formula is embodied in the 1970 legislative proposals of the Department of Housing and Urban Development.

HUD proposes a uniform rent assistance formula for both public housing programs and subsidy programs for private housing. Assisted tenants would pay rents equal to 20 percent of the first \$3,500 of income plus 25 percent of all income over \$3,500. In public housing, HUD would supplement present debt service subsidies as needed to make up the full cost after tenant contributions. In subsidized private housing, 20 percent of available subsidy funds could be spent in the same manner; for the remaining 80 percent, the minimum tenant contribution would have to cover operating costs, with the sliding scale applying above that level.⁶

Virtually all percent-of-income formulas have at least a touch of this sliding-scale principle in that some part of the tenant's gross income is excluded from

⁵ Interest subsidies were first authorized in 1966 under Sec. 221(d)(3) of the National Housing Act of 1937; more generous interest subsidies were authorized in 1968 under Sec. 236 of the same law. The Federal rent supplements program was authorized by Title I of the Housing and Urban Development Act of 1965.

⁶ "Highlights of the Housing and Development Act of 1970," news release of the U.S. Department of Housing and Urban Development (the sponsors of the proposed legislation), 19 March 1970.

"adjusted gross income" before the percentage rate is applied. Thus, the Federal rent supplements program deducts 5 percent plus \$300 per minor child from gross income before applying its 25 percent flat rate. The sliding-scale principle could also be elaborated more fully than it is in the HUD proposal, with an increase in percentage contribution with, say, each additional \$1,000 of income.

In its implications for public and tenant liabilities and administrative requirements, the sliding-percent-of-income approach is not much different from the fixed-percent approach. It is worth noting that the budgetary implications of a change in tenant income are asymmetrical under the sliding-scale approach: A rise in income is penalized while a fall in income is cushioned, just as they are in a progressive income tax schedule.

RENT ASSISTANCE UNDER THREE FEDERAL PROGRAMS

The three general formulas for rent assistance discussed above are capable of any number of variations with respect to tenant eligibility rules, allowable deductions from gross income, rental value of the housing offered by the program, and rates (percent of rent or percent of income) which govern the division of rent between the tenant and the public treasury. To compare their impacts on family budgets beyond the general comments offered in the preceding section, we must choose explicit formulations that nonetheless illustrate general principles and apply them in turn to a standard case—i.e., to a housing unit and a family of specified characteristics.

We selected as examples the actual formulas and rules of each of the three Federal programs described above: the leased public housing program, the rent supplements program, and the 1970 HUD legislative proposals. In the following pages we show how each would affect a four-person family—husband, wife and two minor children old enough to require separate bedrooms—with one employed member (the husband) and no income from sources other than his earnings. The housing occupied in each case is assumed to be a five-room (three-bedroom) apartment.

Within this context, the budgetary implications of each program are powerfully affected by two variables: the income of the assisted family and the market rental value of the housing provided. For each program, we will illustrate the budgetary implications for households whose incomes range from the median welfare allowance (\$3,500) to the low-to-moderate standard (\$7,400) shown in Table 38 for a four-person household. As it happens, the median welfare allowance for a four-person family is also approximately the minimum earnings from full-time employment in New York City, so that this lower limit is consistent with our assumption that the assisted family is self-supporting from the wages of one of its members.⁷

⁷ At New York State's minimum wage of \$1.60 per hour, a 40-hour week and 50-week year would yield an annual gross income of \$3,200. Relatively few occupations in New York City paid less than \$2.00 per hour in 1968. Among those in which at least a fourth of all employed persons earned less than \$2.00 per hour were the following: filing clerks, office boys, shipping clerks, watchmen, janitors, and porters. See U.S. Bureau of Labor Statistics, *Area Wage Survey*, New York Metropolitan Area, April 1968.

With respect to the rental value of the apartment occupied by the assisted family, we have made two alternative assumptions, gross rents of \$2,400 annually and \$1,600 annually. The first figure is the upper limit (as of mid-1969) for a three-bedroom apartment under both the leased public housing program and the rent supplements program.⁸ Both programs are restricted to new or rehabilitated housing which, at then-current construction and financing costs, was unlikely to be available at \$2,400 without tax exemptions or low-interest loans.

The second assumption, an annual gross rent of \$1,600, is our estimate of the full cost in 1967-1968 of a five-room apartment in a well-maintained New-Law tenement (see Table 36, above). None of the three programs illustrated was designed to encompass housing of this kind, which is one of the mysteries of public policy with respect to rent assistance for low-income families; with the exception of the welfare program, all insist on a standard of housing quality substantially exceeding that enjoyed by families whose incomes are several thousand dollars above the limit for participation in the assistance program. By exhibiting the interplay of existing assistance formulas with what we regard as a more realistic standard of housing, we hope to illuminate the issues of a much broader program of housing assistance than now exists.

Rent-Assisted Budgets for Tenants of New Housing

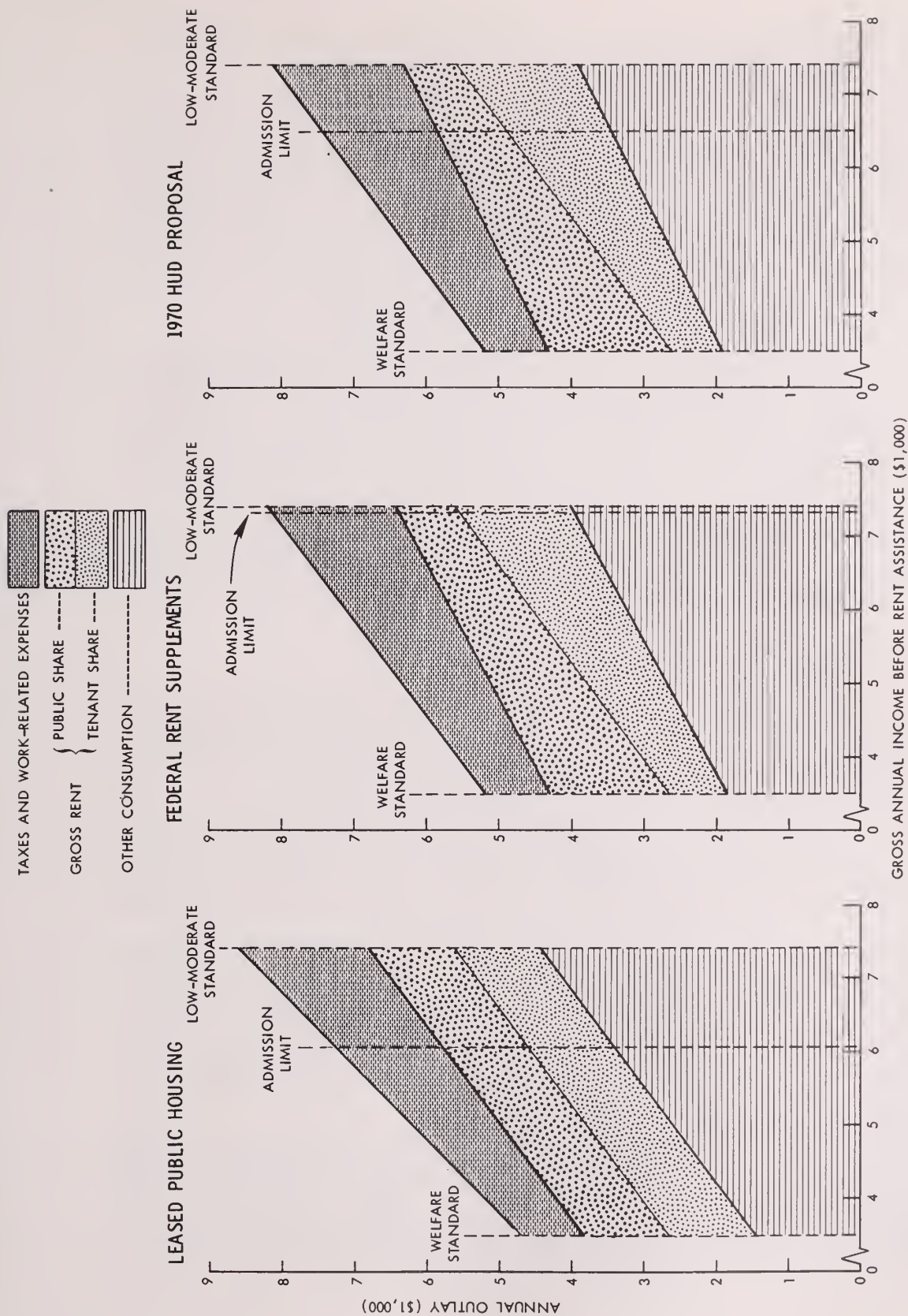
Figure 29 shows how each of the three rent-assistance program affects the budget of a four-person family as its income is varied from \$3,500 to \$7,400. The family is assumed in each case to occupy new or rehabilitated housing whose gross market rental value is \$2,400 per year or \$200 per month.

The tenant's gross annual income prior to rent assistance is shown on the horizontal axis; on the vertical axis we have plotted his annual outlay, including the full market value of his housing, and divided it into three classes of expenditure: taxes and work-related expenses, gross rent, and other consumption. Within the gross rent sector of each chart, we have indicated by darker shading the portions contributed by the Federal government. The computations on which the charts are based are shown in Appendix Table F-1.

Under the leased public housing program, eligible tenants are offered a discount of about 50 percent on the market rent of the units they occupy.⁹ For our four-person family, the gross income limit for admission is about \$6,100; once in the program, however, a family could continue to participate even though its income rose above that level. Rent assistance adds \$1,200 annually (nontaxable) to the

⁸ Office of Housing Sponsorship and FHA Programs, Department of Development, HDA, *A Description of Federally Subsidized Housing Programs*, 1969. To be exact, the limits, including gas and electricity, are \$2,412 and \$2,472, respectively. Subtracting \$12 per month for gas and electricity (see Table 34 in Ch. VI), equivalent contract rents would be \$38 to \$39 per room per month.

⁹ According to the New York City Housing Authority's "1969 Guide to Housing Developments," a tenant of leased public housing pays \$87 monthly for five rooms, not including gas and electricity; including an allowance for these utilities, the total would be close to \$100. In Figs. 29 and 30, we do not take into account the 1969 amendment limiting tenant contributions to 25 percent of adjusted gross income, but its effects are discussed below.



SOURCE: Appendix Table F-1.

Fig. 29—Four-person family budgets under three rent-assistance programs:
new housing at \$2,400 annual gross rent

incomes of all participants. Thus, the income available for nonhousing consumption begins at \$1,405 and rises to \$4,400.

Under the rent supplements program, eligible tenants pay 30 percent of the full rent, or 25 percent of adjusted gross income, whichever is larger. (Adjusted gross income equals 95 percent of gross income less \$300 per minor child.) For our four-person family, the gross income limit for admission happens to be \$7,300, just \$100 below our estimate of the income at which rent assistance is not needed to permit a low-to-moderate standard of living.¹⁰ The amount of rent assistance granted varies from \$1,680 at an income of \$3,500 to \$790 at an income of \$7,400, i.e., from about 70 to 33 percent of the total rent bill. The income available to the tenant for nonhousing consumption begins at \$1,885 and rises to \$3,990.

Under HUD's 1970 legislative proposal, eligible tenants would pay \$700 plus 25 percent of all adjusted gross income over \$3,500. The income limit for admission is the median income of the community, in this case about \$6,500.¹¹ The amount of rent assistance granted varies from \$1,700 at an income of \$3,500 to \$725 at an income of \$7,400, i.e., from about 71 to about 30 percent of the total rent bill. The income available to the tenant for nonhousing consumption begins at \$1,905 and rises to \$3,925. For a four-person family, the formula works out almost identically to that of the rent supplements program despite the difference in nominal rates. This is because the new proposal does not allow any deductions from gross income in determining the adjusted income on which the tenant's contribution is computed.

Rent-Assisted Budgets for Tenants of Old Housing

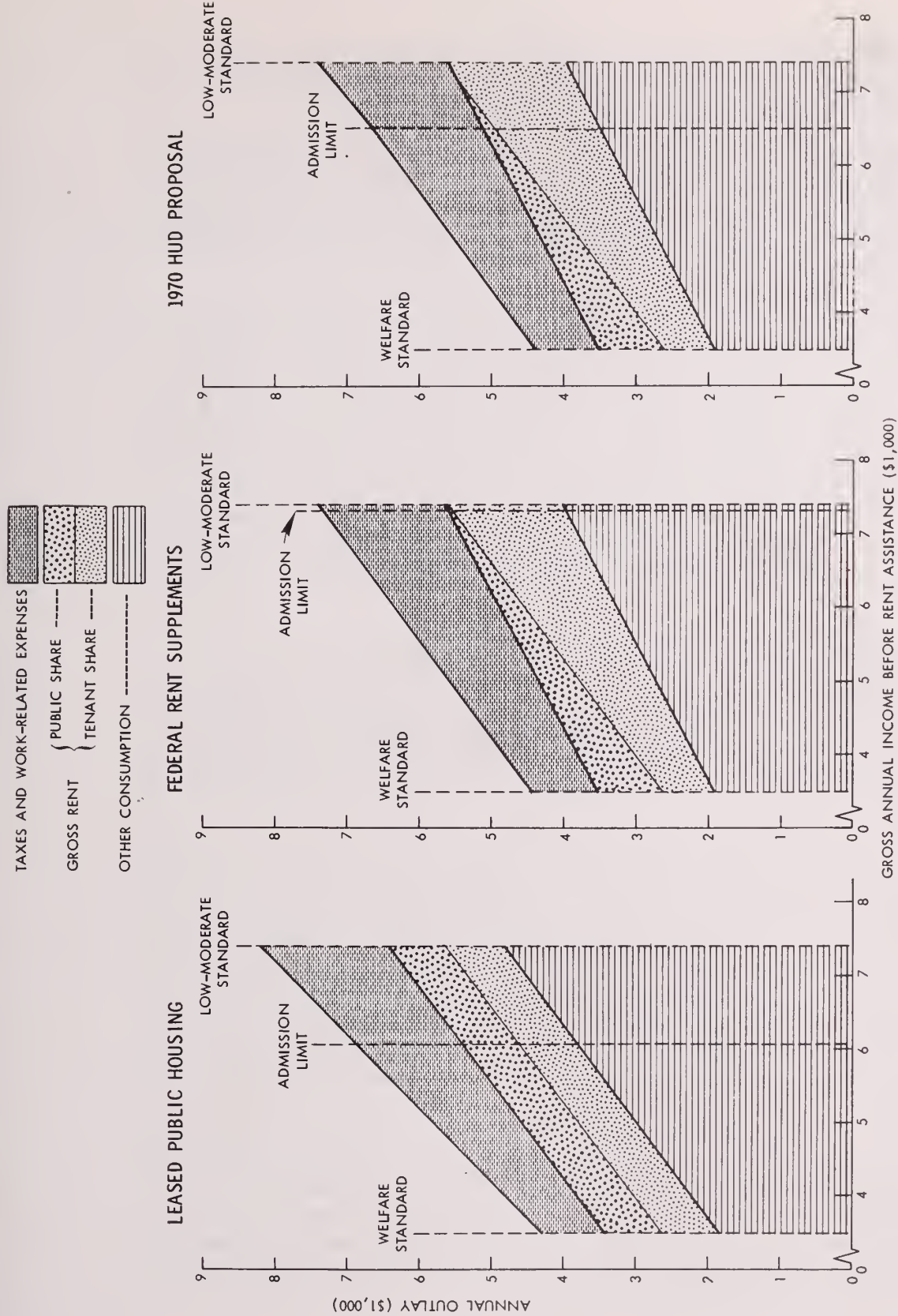
Figure 30 again shows budgetary patterns for rent-assisted families over the income range \$3,500 to \$7,400. It differs from Fig. 29 only in that these families are assumed to occupy well-maintained older housing at an annual gross rent of \$1,600. The supporting computations are shown in Appendix Table F-2.

As noted earlier, none of the three rent-assistance programs here represented was designed to cover housing in this price range. This analysis is intended to show the consequences of the application of existing and proposed rent assistance formulas to a lower standard of housing quality and cost, one that conforms to the

¹⁰ Under program rules, a tenant could continue in occupancy if his income subsequently rose above \$7,300, but as his income rose, he would pay an increasing share of the rent. If the market rental value of the unit he occupies is \$2,400, the tenant will pay the full rent when his gross income reaches \$10,737.

¹¹ Our source on these proposals is a brief and fugitive document. It says that "Eighty percent of the eligible families would be required to have an income not exceeding eighty percent of the median income in the area (as determined by the Secretary). Twenty percent of the families could have an income which exceeded eighty percent of the median provided that their income did not exceed the median income in the area." ("Highlights of the Housing and Development Act of 1970," news release of the U.S. Department of Housing and Urban Development, 19 March 1970.)

The provision for Secretarial determination of the "median income in the area" allows much flexibility. The "area" might be defined as New York City, as the New York-N.E. New Jersey Standard Consolidated Area, or as the HUD Region I. "Median income" might be median income of households, median income of families (excluding unrelated individuals), or median income of families of a particular size. The figure of \$6,500 is the lowest plausible limit, being the median income in 1967 of all households in New York City, as reported by the Housing and Vacancy Survey of 1968. Other plausible alternatives would be higher; for instance, the median income in 1968 of four-person families in New York City, as reported by the Current Population Survey in 1969, was \$9,100. See Appendix B for other possibilities.



SOURCE: Appendix Table F-2.

Fig. 30—Four-person family budgets under three rent-assistance programs:
old housing at \$1,600 annual gross rent

low-to-moderate level of living we have distinguished and is fiscally conceivable for a broad program of housing assistance serving most eligible families rather than, as with existing programs, a small fraction of those eligible.

For the leased public housing program, rather than taking the program's scheduled rent for new or rehabilitated housing, we take the underlying principle that the tenant receives a 50-percent discount on the market rent and apply it to our \$1,600 rent figure. Thus, rent assistance adds \$800 annually (nontaxable) to the incomes of all participants, as compared with \$1,200 under the version of this program presented in Fig. 29.

The tenant's contribution is also smaller, so that the leased housing program applied to old housing leaves the tenant with more income available for nonhousing consumption than does the same formula applied to new housing. In Fig. 30, the income available for nonhousing consumption begins at \$1,805 and rises to \$4,800.

Under the rent supplements program and the 1970 HUD proposals, the shift to lower-cost housing generally has no effect on the tenant's contribution, which is based on his income. As compared with Fig. 29, the Federal contributions shown in Fig. 30 are consistently reduced by \$800. At the low end of the income range shown, the Federal contributions amount to about half the market rent. At annual incomes of \$7,368 for the rent supplements program and \$7,100 for the new proposals, the Federal subsidy terminates, the tenant paying full market rent.

Comparisons with Unassisted Budgets and Budget Standards

The housing objectives of these three programs as illustrated in Fig. 29 are met by supplying new or rehabilitated quarters of adequate size to participating families. In Fig. 30, we have combined the existing program formulas with more modest housing objectives. In both cases, an equally important consideration is how the participating families fare with respect to consumption of other goods and services.

This issue is examined in Table 39 for assisted tenants of new or rehabilitated housing (gross annual rent of \$2,400) and in Table 40 for assisted tenants of well-maintained older housing (gross annual rent of \$1,600). For our standard four-person family with one earner, we show the budget residuals available for nonhousing consumption under each of the three rent-assistance formulas treated in the preceding section, after deduction of income taxes, involuntary insurance, work-related expenses, and the tenant's share of gross rent. These budget residuals of course vary with gross income, and we show them at selected levels of gross income from \$3,500 (the median welfare allowance) to \$7,400 (the low-to-moderate level of living).

For comparison, we show similar budget residuals for unassisted families living in controlled and uncontrolled housing outside Manhattan in 1968. In these cases, typical rent expenditures were derived from the rent-expenditure analysis reported in Ch. IV and Appendix C; the allowances for taxes, insurance, and work-related expenses were identical to those for assisted families. In the last column of each table, we show the typical nonhousing consumption allowance for a four-person

Table 39

FOUR-PERSON FAMILY BUDGETS FOR NONHOUSING CONSUMPTION, BY GROSS INCOME:
COMPARISONS OF RENT-ASSISTED FAMILIES IN NEW HOUSING WITH UNASSISTED
FAMILIES IN CONTROLLED AND UNCONTROLLED HOUSING, 1967-1969

Gross Income before Rent Assistance	Rent-Assisted Families			Unassisted Families ^a		Selected Budget Standards
	Leased Public Housing	Federal Rent Sup- plements	1970 HUD Proposal	In Con- trolled Housing	In Uncon- trolled Housing	
\$3,500	\$1,410	\$1,885	\$1,905	\$1,510	\$1,130	{ Welfare: \$2,370 ^b
4,000	1,810	2,210	2,185	1,890	1,505	
4,500	2,195	2,475	2,445	2,250	1,850	
5,000	2,585	2,745	2,710	2,610	2,205	
5,500	2,965	3,010	2,965	2,965	2,555	
6,000	3,350	3,275	3,225	3,320	2,900	{ Low-Moderate: \$4,000 ^c
6,500	3,730	3,535	3,480	3,675	3,245	
7,000	4,125	3,815	3,750	4,045	3,610	
7,400	4,445	4,035	3,970	4,340	3,895	

SOURCES: For tax and insurance computations, Community Council of Greater New York, *Annual Price Survey, Family Budget Costs, October 1967*, Eleventh Edition, 1968, pp. 17 and 32-33; for rent assistance formulas, Appendix Table E-1; for rent expenditures by unassisted families, Appendix Table C-8.

NOTE: These budgets for nonhousing consumption are residuals of gross income after excluding estimated income taxes, involuntary insurance, work-related expenses, and tenant contributions to gross rent. The family is assumed to be supported by the earnings of one employed member.

^a Typical four-person families headed by white males, age 37, living in rental housing outside Manhattan in 1968.

^b Median welfare allowance less median gross rent, based on tabulations by the Bureau of the Budget of data for 1969 provided by the Department of Social Services.

^c Low-to-moderate nonhousing consumption budget based on estimates by the Community Council of Greater New York for October 1967; see Table 36.

welfare household and the low-to-moderate nonhousing consumption budget based on the Community Council's data.

Looking first at Table 39, we compare the nonhousing consumption budgets of families in new (\$2,400) housing assisted under each of the three programs discussed in the preceding section. Clearly, the leased public housing formula works out quite differently for the tenant than the formulas of the rent supplements program or the 1970 HUD proposal. The latter two yield similar budget residuals over the range of incomes shown. As compared with leased public housing, they are much more generous to families at the low end of this income range and less generous to those at the high end.

Budget residuals under these three programs can also be compared with those typically available to unassisted renters with corresponding gross incomes. Interestingly enough, the leased public housing program requires tenant rent contributions very close to the typical rent expenditures of families living in controlled

Table 40

FOUR-PERSON FAMILY BUDGETS FOR NONHOUSING CONSUMPTION, BY GROSS INCOME:
COMPARISONS OF RENT-ASSISTED FAMILIES IN OLD HOUSING WITH UNASSISTED
FAMILIES IN CONTROLLED AND UNCONTROLLED HOUSING, 1967-1969

Gross Income before Rent Assistance	Rent-Assisted Families			Unassisted Families ^a		Selected Budget Standards
	Leased Public Housing	Federal Rent Sup- plements	1970 HUD Proposal	In Con- trolled Housing	In Uncon- trolled Housing	
\$3,500	\$1,810	\$1,925	\$1,905	\$1,510	\$1,130	{ Welfare: \$2,370 ^b
4,000	2,210	2,210	2,185	1,890	1,505	
4,500	2,595	2,475	2,445	2,250	1,850	
5,000	2,985	2,745	2,710	2,610	2,205	
5,500	3,365	3,010	2,965	2,965	2,555	
6,000	3,750	3,275	3,225	3,320	2,900	
6,500	4,130	3,535	3,480	3,675	3,245	{ Low-Moderate: \$4,000 ^c
7,000	4,525	3,815	3,750	4,045	3,610	
7,400	4,845	4,045	4,045	4,340	3,895	

SOURCES: For tax and insurance computations, Community Council of Greater New York, *Annual Price Survey, Family Budget Costs, October 1967*, Eleventh Edition, 1968, pp. 17 and 32-33; for rent assistance formulas, Appendix Table E-1; for rent expenditures by unassisted families, Appendix Table C-8.

NOTE: These budgets for nonhousing consumption are residuals of gross income after excluding estimated income taxes, involuntary insurance, work-related expenses, and tenant contributions to gross rent. The family is assumed to be supported by the earnings of one employed member.

^a Typical four-person families headed by white males, age 37, living in rental housing outside Manhattan in 1968.

^b Median welfare allowance less median gross rent, based on tabulations by the Bureau of the Budget of data for 1969 provided by the Department of Social Services.

^c Low-to-moderate nonhousing consumption budget based on estimates by the Community Council of Greater New York for October 1967; see Table 36.

housing, though the latter undoubtedly get less for their money than do the former. (In the table, this similarity in rent payments at each level of income is revealed by the similarity of budget residuals, since all other budget components are identical in the two cases.) The other two assistance programs compare differently with rent-controlled private housing. For families with incomes under \$5,500, they not only provide better housing but leave the tenant with more to spend for nonhousing consumption.

Uncontrolled private housing is more nearly comparable in quality to that provided under our three assistance programs. However, at every level of income between \$3,500 and \$7,400, the typical tenant of uncontrolled housing spends more on rent and thus has less for nonhousing consumption than does his rent-assisted counterpart. The differences are greatest at the low end of the income range.

Finally, we may compare the situations of assisted tenants at the extremes of the range with the budget standards in the last column. *For families with earned gross incomes of \$3,500, none of the rent assistance programs leaves a budget for*

nonhousing consumption that is as large as the amount typically allowed for this purpose by DSS. The leased public housing program leaves such a tenant with only 59 percent of the amount that DSS considers essential; the other two programs leave him with about 80 percent of this amount. Of course, the unassisted tenant fares no better; if he is unable to find controlled housing, his budget for nonhousing consumption is less than half of the DSS allowance.

At the other end of the scale, we may note that an earned gross income of \$7,400 leaves both assisted and unassisted families with a budget residual more or less adequate to cover the Community Council's estimate of the cost of a low-to-moderate level of nonhousing consumption. *Here, the leased public housing program is the most generous, exceeding Community Council standards by 11 percent; rent control works just about as well for these tenants.*

We turn now to Table 40, where the housing standard for assisted families has been lowered to one that carries a full annual cost of \$1,600. Since the assistance formulas of Federal rent supplements and the 1970 HUD proposal base tenant contributions on tenant income rather than on the cost of the housing, when these formulas are applied to this new situation, tenant rent payments, and therefore budget residuals, are unaffected below the point at which the tenant is paying the full \$1,600.¹² For both programs, this occurs at gross incomes between \$7,000 and \$7,400.

The leased public housing program uses a rent-splitting formula to determine the amount of tenant contributions, taking no account of tenant income. With a lower housing standard and lower cost, the tenant's share is reduced by the same dollar amount at every level of income. The budget residual of the family with an earned gross income of \$3,500 is increased by more than a fourth as a consequence of shifting to less expensive housing, thus almost reaching the levels of the other two programs. For families with earned gross incomes of \$7,400, leased public housing offers a budget residual that is a fifth larger than that offered by the other two programs. At all levels of income, it leaves assisted families with more for nonhousing consumption than is available to unassisted tenants of private housing, whether controlled or uncontrolled.

As compared with our welfare budget standard for nonhousing consumption, our hypothetical leased public housing program using old housing does much better by families who live on earned incomes than does the actual program. Even assisted families with earned gross incomes of \$3,500 are able to afford 76 percent of the welfare standard of nonhousing consumption, and those with gross incomes a bit over \$4,000 can afford the full amount. At the other end of the scale, however, this version of the leased public housing program leaves the assisted family whose earned gross income is \$7,400 with a budget residual far above the Community Council's allowance for a low-to-moderate standard of nonhousing consumption.

¹² The first entries in Tables 39 and 40 for the Federal rent supplements program, for families earning \$3,500, are exceptions. That program requires the tenant to pay 25 percent of adjusted gross income or 30 percent of scheduled gross rent, whichever is larger. In the case of new housing with a scheduled gross rent of \$2,400, the second rule would apply, making the tenant contribution larger than it would have been for old housing with a scheduled gross rent of \$1,600. At all gross incomes of \$4,000 or more, the 25-percent-of-income rule prevails for both types of housing.

We remind the reader that all the standards against which we have tested rent-assistance formulas—welfare allowances, expenditures of unassisted families, and the cost of a low-to-moderate level of living—are *typical* values: medians, fitted regression estimates, and budget-study estimates, respectively. The actual figures would vary with the composition and special circumstances of individual households. The significance of *small* differences between the standards and the nonhousing consumption budgets of unassisted families is therefore open to question.

Even with this qualification, one important characteristic of these rent-assistance programs when applied to new or rehabilitated housing is evident from Table 39: None of them fully remedies the disjuncture between the level of nonhousing consumption available to welfare clients and that available to unassisted families dependent on earned income. Whether the issue is regarded as a question of hardship, as a question of equity, or as a question of motivating welfare clients to seek employment, this disjuncture, which increases with family size, strikes us as a major defect in New York City's social welfare policies.¹³

The least effective housing assistance program in this respect is the leased public housing program as it operated prior to the 1969 amendment limiting tenant rent payments to 25 percent of adjusted gross income. Under this amendment, the rent payment for new housing of a family of four with an earned gross income of \$3,500 is reduced by \$370, bringing its budget residual for nonhousing consumption up to \$1,780—still only 75 percent of the median DSS allowance for this purpose. At gross incomes over \$5,000, this provision ceases to have any practical effect, since the tenant's half of the annual gross rent of \$2,400 is less than a fourth of his adjusted gross income.

Near the upper end of our income range, \$7,400, the rent-splitting formula of leased public housing strikes us as overgenerous, leaving a family of four with a residual consumption budget that is as much as 111 percent of the amount allocated by the Community Council for this purpose. Such discrepancies arise from the nature of the formula, which (except for the 1969 amendment) does not attempt to relate tenant rent payments to tenant incomes.

The fixed percent-of-income formula used in the Federal rent supplements program and the sliding scale proposed by HUD in 1970 for all programs behave much better with respect to our budget standards. Because these formulas are based on tenant income rather than on the cost of the housing, their impacts on tenant budgets are virtually the same whether the program is assumed to provide housing costing \$2,400 annually (Table 39) or \$1,600 annually (Table 40). In the latter case, the leased public housing formula works fairly well at the low end of our income range but is markedly over generous at the high end, leaving the tenant with a residual consumption budget that is 121 percent of the amount allocated by the Community Council for this purpose.

¹³ For a broader discussion of this issue, see Blanche Bernstein, "Welfare in New York City," *City Almanac*, Vol. 4, No. 5 (Center for New York City Affairs, New School for Social Research, February 1970).

Public Contributions Required by Alternative Formulas

Table 41 shows the amounts of the public contributions to gross annual rents required under each of the three rent assistance formulas discussed above, first for existing programs that provide new or rehabilitated housing with a gross annual rent of \$2,400, then for our hypothetical alternative program that provides well-maintained older housing with a gross annual rent of \$1,600.

Table 41

PUBLIC CONTRIBUTIONS UNDER ALTERNATIVE RENT ASSISTANCE FORMULAS:
NEW AND OLD HOUSING FOR A FOUR-PERSON FAMILY, 1969

Gross Income before Rent Assistance	New Housing at \$2,400 Annual Cost			Old Housing at \$1,600 Annual Cost		
	Leased Public Housing	Federal Rent Sup- plements	1970 HUD Proposal	Leased Public Housing	Federal Rent Sup- plements	1970 HUD Proposal
\$3,500	\$1,200	\$1,680	\$1,700	\$800	\$920	\$900
4,000	1,200	1,600	1,575	800	800	775
4,500	1,200	1,480	1,450	800	680	650
5,000	1,200	1,360	1,325	800	560	525
5,500	1,200	1,245	1,200	800	445	400
6,000	1,200	1,125	1,075	800	325	275
6,500	1,200	1,005	950	800	205	150
7,000	1,200	890	825	800	90	25
7,400	1,200	790	725	800	0	0

SOURCE: Computed from data in Appendix Table E-1.

Under the rent-splitting formula of the leased public housing program, the public treasury contributes \$1,200 toward the annual cost of each unit of new housing and \$800 toward the annual cost of each unit of old housing, regardless of tenant income; a shift from the present "new housing" policy to an "old housing" policy would thus reduce public costs by one third, or \$400 per unit.

Under the other two formulas, public costs are highest for families at the bottom of our income range, declining as income increases. The shift from new to old housing would result in quite substantial savings—\$800 per unit for all but the families close to the top of the income range. The percentage reduction in public costs from such a move ranges from about 45 percent for families with earned gross incomes of \$3,500 to 100 percent for families with earned gross incomes just below \$7,400.

LIMITATIONS OF EXISTING PROGRAMS

Construction-Oriented Programs

Excluding welfare rent assistance, the eleven Federal, State, and City housing assistance programs listed in Table 25 (Ch. VI) provided subsidies for about 234,000 households in 1968. "Middle-income" programs, aiding limited-profit (Mitchell-Lama), limited-dividend, and redevelopment companies, accounted for about 85,000 of these. "Low-income" public housing programs operated by the New York City Housing Authority accounted for another 144,000 households, including some 24,000 who were also welfare recipients. Other "low-income" programs—Federal interest subsidies and rent supplements and the State low-rent assistance program—aided only about 5,000 households; though some programs were then new and have since grown in size, they still do not account for more than 10,000 households.

Although these programs differ in many respects, they can all be described as "construction-oriented," and they have three features in common:

1. Rent assistance is available only to the occupants of specified housing units under contract to the assisting agency. With minor exceptions, only newly constructed or rehabilitated housing has been eligible for such contracts.
2. Families with very low earned incomes have not been well served by these programs. They tend to be excluded by assistance formulas that put the minimum tenant contribution beyond their means.
3. All are token programs in the sense that only a small fraction of those families eligible to participate can be accommodated by program resources.

These features are interrelated. The high cost of new and rehabilitated housing requires a substantial public contribution for each family served, even though the tenant is required to pay as much or more rent than he did on the private market. Families with moderate incomes can pay a substantial share of the cost of this high-quality housing more easily than low-income families, and program eligibility formulas reflect this fact. With program eligibility extending into the moderate income range—or even higher in some State and City programs—no level of government has been willing to vote the funds that would be needed to aid all or even most eligible families. To legitimate the selective conferral of benefits within a large class of eligible families, rent assistance is granted only to tenants of particular housing units that have been built or rehabilitated under contract to the assisting agency. Indeed, in several of the programs, rent assistance seems almost incidental to the objective of adding to the stock of housing.

Welfare Rent Assistance

The other major program of housing assistance in New York City is operated

by the City's Department of Social Services, which provided rent assistance for about 240,000 households in 1968. Unlike the programs discussed above, it is not designed to promote housing construction or rehabilitation; indeed, its effective standards of housing quality are minimal. Welfare clients are expected to find quarters in the existing inventory of rental housing; about 70 percent of them occupy Old- or New-Law tenements. When the client moves, his rent assistance moves with him.

While the quality and cost of the housing provided to welfare clients is lower than that of housing provided by construction-oriented programs, welfare rent assistance usually covers a much larger fraction of that cost—up to 100 percent for those with no outside income. The average gross rent paid by welfare clients in 1969 was just under \$1,000, of which DSS contributed an average of 85 percent.¹⁴ The program serves the poorest of the City's residents, and is manifestly open to all eligible families. Yet, as we shall see, many who appear to be eligible do not participate.

Incomplete Coverage of Existing Programs

The most serious limitation of existing programs of housing assistance relates not to the quality of housing provided or to the portion of the cost borne by the tenant, but to their incomplete coverage. Whether the need for housing assistance is measured against our own criterion of ability-to-pay, or against existing program standards of eligibility, only a fraction of those eligible are actually assisted.

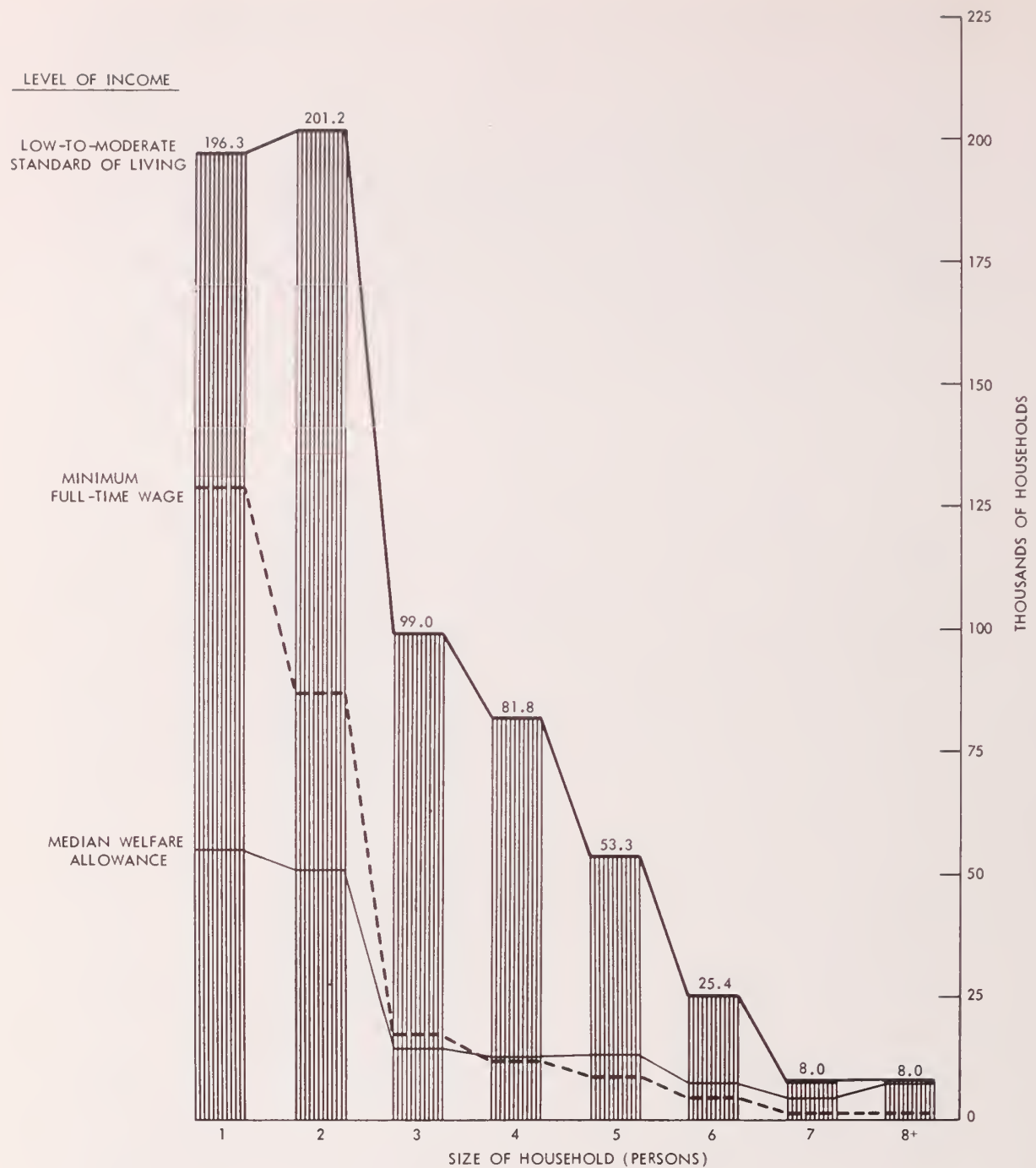
Our criterion, a disposable income adequate to support a low-to-moderate standard of living, is well below the income limits of some of the City's housing assistance programs.¹⁵ Using that criterion, we have estimated the numbers of renter households in 1968 who were unable to afford the full costs of adequate housing, yet were not receiving rent assistance under any of the programs discussed above. These estimates are shown in Fig. 31, by size of household.

The figure also shows the number of renter households whose gross incomes were less than the minimum full-time wage of \$3,200; since welfare-assisted families are excluded, these must be households whose potential breadwinners were unemployed or underemployed for part of the year (1967) for which income was reported, and households whose incomes consist of pensions or social security payments. Finally, within this group, we show those whose reported incomes were less than the median welfare allowance for that size of household. Some were doubtless eligible for welfare assistance but had not applied; we have no way of telling how many.

The income distribution on which Fig. 31 is based is presented in Appendix Table F-3, together with a description of the methods by which it was derived. Three points should be emphasized here. First, these estimates are based on data from two sources—the Housing and Vacancy Survey of 1968 and case records of the Depart-

¹⁴ These figures are based on tabulations prepared by the Bureau of the Budget from DSS records for 1 July 1969. See Appendix C and Table C-5 for details.

¹⁵ See Table 36, above, for our disposable income criterion and the equivalent gross incomes for households supported by one earner. The latter incomes may be compared with program eligibility limits shown in Table 25.



SOURCE: Appendix Table F-4.

Fig. 31—Renter households not receiving rent assistance with incomes below selected levels: New York City, 1968

ment of Social Services—that differ by 14 months in date and also differ in methods of recording the pertinent information. Despite our compensatory adjustments of the DSS data, the resulting estimates of numbers of households *not* on welfare, by income, are clearly unreliable in fine detail. Second, since 1968, there has been a significant increase in the number of welfare households; between May 1968 and July 1969, some 65,500 households, mostly consisting of one or two persons, were added to the welfare rolls. We cannot tell for sure how many were recent immigrants and thus were not included in our 1968 sample of renter households, and how many were then residents of the City and included in the sample but were not on welfare at that time.¹⁶ Fragmentary evidence indicates that most fall in the latter category; if so, the increase in welfare-assisted households would be more or less matched by a decrease in the number of unassisted households shown in Fig. 31. Finally, changes in the Federal income tax law effective in 1970 will alter the relationships between gross and disposable income that underlie this figure, and changes in the Federal welfare program now being considered by Congress may alter the relationship between welfare allowances and gross incomes of welfare-assisted families, so that even an accurate and up-to-date accounting of households by income would require adjustment if it were to be used for estimating *prospective* caseloads or costs of rent assistance.

With these qualifications in mind, we can consider the income distributions shown in Fig. 31. We find about 673,000 unassisted households whose 1967 gross incomes were inadequate to support a low-to-moderate standard of living. Of these, about 400,000 reported gross incomes high enough to have been conceivably derived from full-time employment, although they could have been derived from property or from pensions. About 260,000 were either underemployed or living on transfer payments. Of this group, over 80 percent (215,000) were households of one or two persons, suggesting a high incidence of elderly pensioners. About 73,000 one-person households and 36,000 two-person households reported incomes above the median welfare allowance (so presumably were ineligible for welfare assistance) but below the minimum full-time wage (so presumably were not employed full time).

For three-person households, the median welfare allowance of \$2,860 is only a little less than the minimum full-time wage (\$3,200). For larger households, the median welfare allowance exceeds the minimum full-time wage. Although there were about 275,000 households of three or more persons whose gross incomes were below the levels needed to support a low-to-moderate standard of living, only about 63,000 were below the minimum wage or welfare levels. We assume that the other 212,000 households of three or more persons shown in Fig. 31 were dependent on the earned income of one member, with a negligible number of pensioners.

As we have pointed out, events since 1968 have significantly altered the distribution of families displayed in Fig. 31. Not until data are available from the U.S. Census of 1970 can the figures be usefully updated. They will serve, nonetheless, as a working definition of the universe of households to which an expanded program of rent assistance might apply. In the following pages, we will examine the needs of each of the subgroups identified in the figure.

¹⁶ See "Public Assistance as a Source of Income" in Ch. III, especially Table 10 and Footnote 11.

DESIGNING A COMPREHENSIVE RENT ASSISTANCE PROGRAM

Five Principles of Program Design

As we indicated earlier, the central objective of a housing assistance program is to enable all families with scant or limited budgets to occupy decent, safe, and sanitary housing of adequate size. *The first principle of a rent assistance program, then, is that all households whose disposable incomes are inadequate to support a low-to-moderate level of living, including adequate housing, should be eligible for rent assistance.* In Ch. VI, we provisionally estimated the full costs of such housing for each size of household. *The second principle, therefore, is that rent-assisted budgets must allow for rent expenditures adequate to cover the full costs of a low-to-moderate level of housing consumption.*

The third principle is that the budget must at least allow the level of nonhousing consumption acknowledged in welfare schedules as the publicly supported minimum. A program that offered low-income families housing assistance on the condition that they deprive themselves of a bare living in other respects would be a travesty of social welfare policy.

The fourth principle is that rent assistance should not operate so as to discourage those who can increase their incomes by productive employment from so doing. For families of a given size, a larger earned income should always permit a higher overall standard of living than a smaller earned income.

The fifth principle is that rent assistance should be limited to the minimum consistent with the first four principles. One family's benefits are paid by another family's taxes, and it is evident to anyone who has studied the incidence of taxation that it is not simply a matter of taking from the rich to give to the poor; most tax revenues come directly or indirectly from those near the middle of the income distribution.

Matching Rent Assistance to Family Budgets

These principles are honored, with minor qualifications, in the trial budgets presented in Figs. 32 to 34 for households of one to six persons.¹⁷ The construction of these figures is based on a mathematical formula to be presented in the following section; because the formula is simpler in its application than it appears to be when written in formal algebra, we develop it first by illustration.

In the figures, the panel for each size of household shows consumption budgets (vertical axis) over a range of disposable incomes (horizontal axis). The consumption budgets include public contributions where appropriate, and are divided into allowances for gross rent and for other goods and services. The range of disposable

¹⁷ We do not show budgets for households of seven or more persons because these are few in number and introduce no new issues. However, Appendix Table F-5, which contains the data from which these figures were drawn, includes up to eight persons.

incomes (before assistance) in each panel extends from zero to the amount needed by households of that size to support a low-to-moderate level of living.

The amount of consumption that a household could manage without assistance is shown in each panel by the heavy diagonal line (i.e., each additional dollar of disposable income allows an additional dollar of consumption). The vertical distance between that diagonal and the budget line above it measures the amount of public assistance needed to fill out the scheduled consumption budget in conformity with our principles of assistance.

Finally, each panel shows three broken vertical lines, marking off ranges of disposable income. One line indicates the amount of disposable income below which rent assistance alone would be inadequate to raise a household's consumption budget to our modified welfare level.¹⁸ A second line indicates the amount of disposable income that would be available to a household supported by one person employed at the full-time minimum wage of \$3,200, after deduction of taxes and work-related expenses. In 1968, one- to four-person households would have been liable for income taxes on earnings of \$3,200, leaving them with disposable incomes ranging from \$1,865 to \$2,370, respectively. For larger households, we deduct only fixed amounts for social security and work-related expenses, leaving each household with a disposable income of \$2,395.

The third line indicates the amount of disposable income needed by that size of household to support a low-to-moderate level of living without public assistance. These amounts are taken from Table 36 in Ch. VI; they include the full cost of well-maintained older housing and the Community Council's allowance for nonhousing consumption.

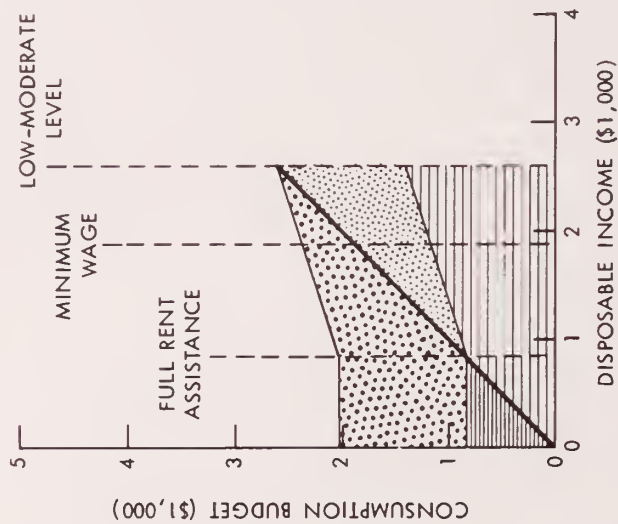
One-Person Households. Consider the first panel of Fig. 32, showing trial budgets for one-person households whose disposable incomes before assistance range from zero to \$2,600. To the left of the first vertical line, we show our modified welfare budget of \$2,030. It includes \$1,200 for gross rent and \$830 for other consumption, the minima for a single person under our second and third principles. In the absence of any outside income, these consumption expenditures would have to be supported entirely by public assistance of the income-maintenance type, as indicated by the darker shading. As outside income increased, public contributions could be reduced, dollar for dollar. A single person whose disposable income before assistance amounted to \$830 (first vertical line) could afford the full amount of nonhousing consumption specified in our basic budget, provided he was given full rent assistance.

To the right of the first vertical line, we show consumption budgets rising linearly from \$2,030 to \$2,600, i.e., from the welfare level to the low-to-moderate level. The increase is all assigned to nonhousing consumption; the gross rent allowance is held constant at \$1,200. To enable households in this range of disposable incomes to afford the scheduled amounts of consumption, our formula proposes rent

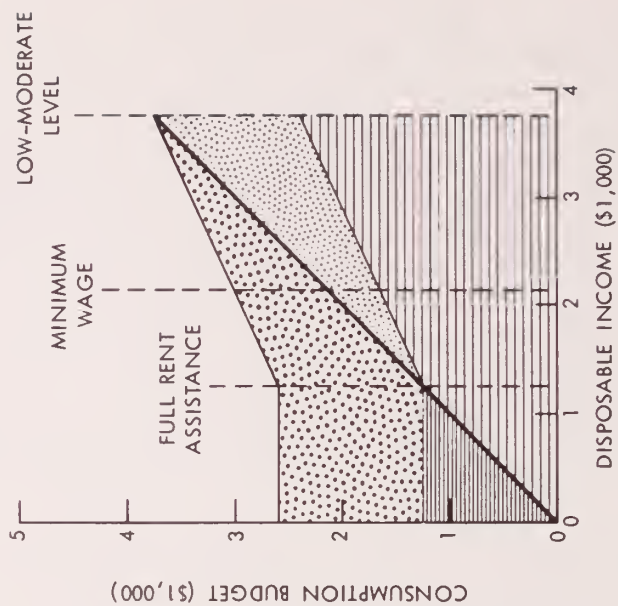
¹⁸ The modification consists in increasing the housing allowance of the 1969 median welfare budget to an amount adequate to cover the full cost of well-maintained older housing. The allowance for nonhousing consumption is unchanged.



1-PERSON HOUSEHOLD



2-PERSON HOUSEHOLD



SOURCE: Appendix Table F-5.

Fig. 32—Trial budgets, including public contributions, for low-income households of one and two persons: New York City, 1968

assistance beginning at \$1,200 and decreasing linearly as disposable income rises until, at the low-to-moderate level, no further assistance is provided.

Note that the amounts of rent assistance scheduled over this range are more than would be needed simply to bring a family's budget up to a welfare level of living. If this were the objective, rent assistance could be terminated at a disposable income of \$2,030 rather than \$2,600. By reducing rent assistance more gradually, we retain an incentive for the recipient to increase his earnings and consequently his level of living—as required by our fourth principle. Thus, there is no level of disposable income in this range at which the recipient of rent assistance, as scheduled in the figure, would be as well off if his outside income were less rather than more.¹⁹

The vertical line marking the disposable income of a single person employed full time at the minimum wage of \$3,200 is included primarily for orientation. In general, persons to the left of that line would be dependent on pensions or other nontaxable transfer payments, so that their gross and disposable incomes would be identical. Persons to the right of that line could conceivably be employed, in which case gross and disposable incomes would differ. In either case, rent assistance is figured on disposable, rather than gross, income. Persons earning the minimum wage would be offered \$500 in rent assistance, permitting them nonhousing consumption of \$1,165, about \$335 more than the welfare budget allows.

So far, we have shown that the assistance schedules displayed in the figure conform to the first four principles offered as guidance for the program. The fifth principle is only approximately met, because we cannot tell exactly how far assistance for those to the right of the first vertical line could be curtailed without damaging the incentive for the recipient to increase his income, only that it must be less than a dollar's reduction in rent assistance for each dollar of increase in disposable income.

Two-Person Households. The second panel of Fig. 32 presents trial budgets for two-person households whose disposable incomes range from zero to \$3,750, the low-to-moderate level of living. Again, the vertical distance between the diagonal and the upper budget line represents the amount of public contribution required.

For households with disposable incomes under \$1,250, we show budgets that imply income maintenance at \$2,600, the modified welfare level for two persons; this includes \$1,350 for housing and \$1,250 for other consumption. To reach this level, more assistance would be needed than could be supplied through housing subsidies alone.

For couples with disposable incomes above \$1,250, our formula provides partial rent assistance, the amount decreasing as disposable income approaches the low-to-moderate level of \$3,750. Over this range, the assistance schedule holds total housing expenditures constant at \$1,350, but permits other consumption to increase from \$1,250 to \$2,400.

Couples supported by the full-time employment of one person at the mini-

¹⁹ This statement does not include those with outside incomes of any amount below \$830, where the income maintenance principle applies. For these, we can only say that no one would be *better* off if his outside income were less rather than more.

mum wage would have disposable incomes of about \$2,135, and would receive \$870 in rent assistance under our schedule. This would permit them nonhousing consumption of \$1,655, about \$400 more than the welfare budget allows.

Three- and Four-Person Households. The two panels of Fig. 33 illustrate assistance schedules for households of three and four persons, calculated according to the same principles. As household size increases, basic allowances for both housing and nonhousing consumption increase, so that the amount of aid needed at any given level of disposable income is always greater for a larger household size; the range of disposable incomes over which income maintenance is appropriate grows wider, as does the range over which rent assistance is needed. The lowest possible disposable income from full-time employment is \$2,265 for three-person households and \$2,370 for four-person households. For four-person households this disposable income also happens to be the welfare budget for nonhousing consumption. Consequently, income maintenance is indicated for all four-person households with disposable incomes below the minimum wage level, with partial rent assistance targeted on households supported by employment.

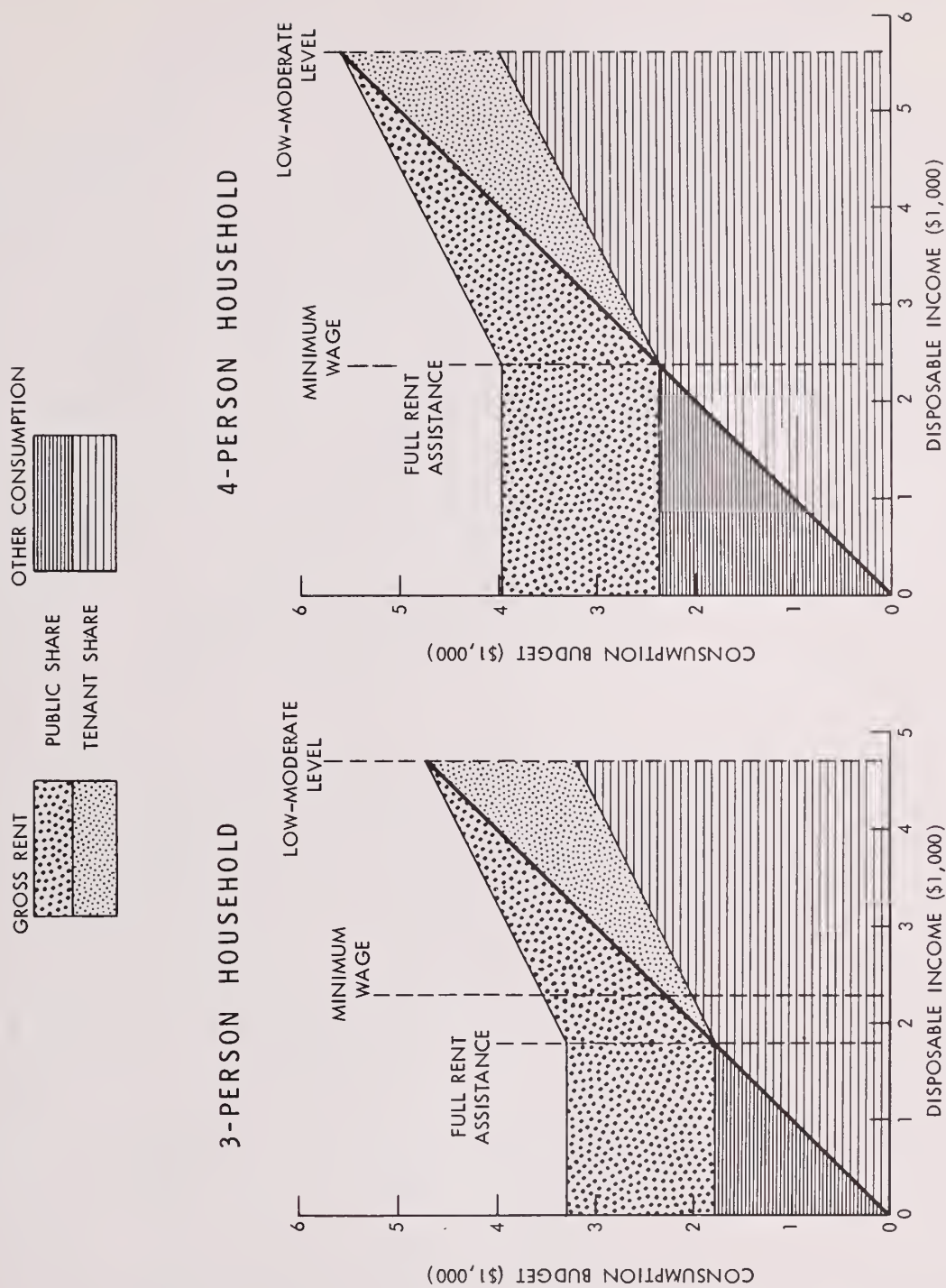
We may note that a gross earned income of \$7,400 would be required to yield the indicated low-to-moderate disposable income of \$5,600 for four persons (one employed); for four-person renter households in 1968, the median gross income was \$7,300, so our schedule implies at least partial rent assistance for about half of all four-person households.

Five- and Six-Person Households. The two panels of Fig. 34 illustrate assistance schedules for households of five and six persons. The principal difference between these schedules and those shown for three and four persons is that the range of income maintenance now extends beyond the minimum-wage level of disposable income. This is hardly surprising; a disposable income of \$2,395 would not go very far in a family of five, much less six, persons. The modified welfare budget for five persons is \$4,660; for six persons, it is \$5,950. The low-to-moderate levels of living are correspondingly higher, \$6,500 and \$7,400 for five and six persons, respectively; the corresponding gross incomes from employment of one family member would be \$8,350 and \$9,350, well above the median values reported by renter households of these sizes in 1968.

Thus, among households not now eligible for rent assistance, those most in need of it are not (as is usually assumed) retired single persons and couples who have modest incomes from Social Security or pensions, but families supported by earnings from unskilled labor—particularly large families.

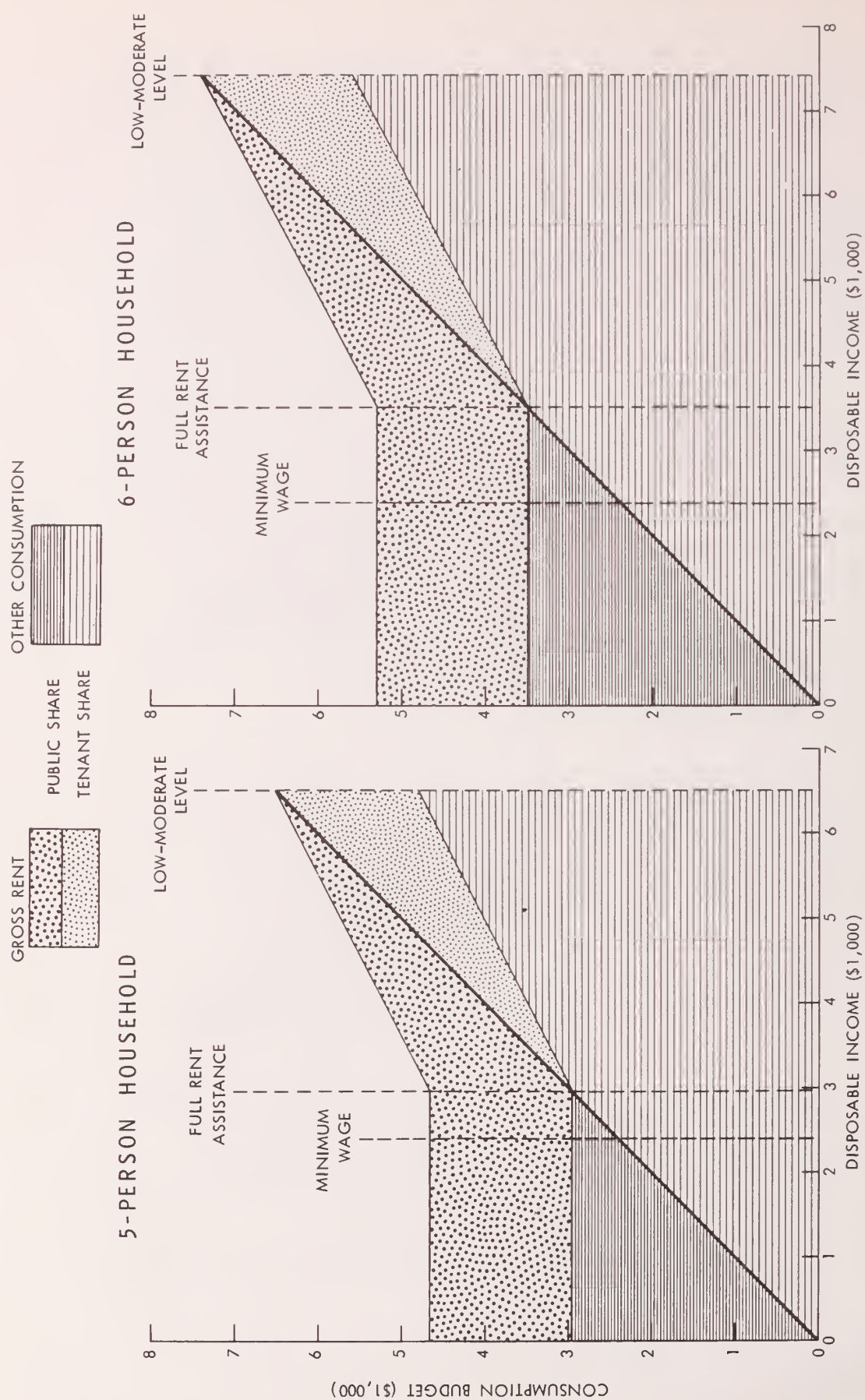
A Mathematical Formulation

In the preceding section we have illustrated how rent assistance might be distributed (1) among all families below the low-to-moderate income level so as to enable them all (2) to afford the full costs of well-maintained housing, and (3) to afford at least the welfare level of nonhousing consumption. The pattern of assistance grants was also designed so that (4) a larger earned income always permitted an assisted family to live better than a smaller earned income, and (5) the amounts



SOURCE: Appendix Table F-5.

Fig. 33—Trial budgets, including public contributions, for low-income households of three and four persons: New York City, 1968



SOURCE: Appendix Table F-5.

Fig. 34—Trial budgets, including public contributions, for low-income households of five and six persons: New York City, 1968

of assistance allowed were no greater than needed to fulfill the first four requirements.²⁰

The mathematical principle on which our illustrations are based can be expressed quite succinctly, as follows:

$$a = \left\{ \frac{Y_2 - y}{Y_2 - C_1} \right\} R, \quad \text{for } C_1 < y < Y_2, \quad (1)$$

where a is the amount of rent assistance provided to a family whose disposable income (gross income after taxes and work-related expenses) is y ; R is the full cost of the housing provided; Y_2 is the disposable income needed to support a low-to-moderate level of living; and C_1 is the welfare or minimum level of nonhousing consumption. In other words, the amount of rent assistance is a fraction of full-cost rent, that fraction diminishing as the assisted family's disposable income approaches the low-to-moderate disposable income. In Appendix F, we prove that this particular formula satisfies the first four conditions listed above and offers a reasonable approximation to the fifth condition.²¹

The tenant's contribution to gross rent is, of course, the difference between R and a , which may also be written (with the same restriction on permissible values of y).

$$R - a = \left\{ \frac{y - C_1}{Y_2 - C_1} \right\} R. \quad (2)$$

The restriction on Eqs. (1) and (2) limits the application of our formula to households whose disposable incomes fall between the amount needed for a welfare level of nonhousing consumption and the amount needed for a low-to-moderate level of living, including housing costs—in other words to the range over which partial rent assistance is an appropriate response to a household's budgetary problems. As shown in Figs. 32 to 34, we suggest a policy of general income maintenance for those with very low incomes, and no aid for those with incomes above the low-to-moderate level.

Our formula is more general than the applications illustrated in Figs. 32 to 34, above. Those applications reflect the particular levels of disposable income that we chose as eligibility limits for each size of household, as well as the gross-rent allowances we specified for each size of family. As we have repeatedly noted, those

²⁰ The last condition is not strictly satisfied by our illustrations or by the formula presented below. Finding a true minimum would require information about the trade-off between income and leisure that is not available. We have settled for a simple but reasonable approximation from above. See Appendix F for further discussion of this point.

²¹ Two additional definitions explain the notation used in the formula:

$$Y_1 = C_1 + R \quad \text{and} \quad Y_2 = C_2 + R,$$

where Y_1 is the welfare allowance and C_1 and R are the portions designated for nonhousing consumption and rent, respectively; Y_2 is the low-to-moderate disposable income and C_2 is the low-to-moderate allowance for nonhousing consumption.

choices are not purely scientific, but reflect to some degree our own judgments in social policy, judgments with which others might reasonably disagree. It is worth recalling that they also reflect consumer prices and housing supply costs current in New York City in 1968, prices and costs which may have since changed by as much as 20 percent.

The formula, however, is simply a mathematical expression of the five principles that head this section. While these principles would certainly not satisfy everyone concerned with housing assistance policy, they have an internal logic that would appeal to many who might disagree with our choices of eligibility limits or with our estimates of the costs of adequate housing. The formula can be readily used in conjunction with alternative eligibility limits and rent allowances to generate different schedules of rent assistance that still conform to those underlying principles.

SUMMARY

In Ch. VI, we developed a "disposable income" criterion for distinguishing families who need rent assistance in order to pay the full costs of well-maintained housing without reducing their other consumption below the Community Council's low-to-moderate level of living. For families whose incomes are below this level, there is a further question: *How much rent assistance do they need?*

In an attempt to answer this question, we distinguish between a public policy of income maintenance and one of housing assistance. The public commitment to income maintenance is embodied in the welfare program, which ensures a minimum standard of living to those unable to provide for themselves. Above this minimum, we see rent assistance as an incentive for a special kind of consumption which is believed, rightly or wrongly, to entail benefits either not perceived or not captured by the consumer. Budget studies indicate that the incentive is not generally required to persuade those whose disposable incomes are above our low-to-moderate level to consume the amount of housing that seems to satisfy the public consensus.

The range of disposable incomes between the welfare level and the low-to-moderate level is therefore the range within which rent assistance, but not income maintenance, seems appropriate. Within this range, there are precedents for three kinds of formulas for rent assistance:

1. Rent-splitting formulas, by which the full cost of rental housing is divided between the public treasury and the tenant in proportions which do not vary with the income of the tenant. Federal, State, and City public housing programs have traditionally operated under such a formula.
2. Fixed-percent-of-income formulas, by which tenant contributions to the cost of publicly assisted housing are fixed as a percentage of tenant income, the public treasury making up the difference between the tenant contribution and full cost. The Federal rent supplements program is of this type.
3. Sliding-percent-of-income formulas, by which tenant contributions to the

cost of publicly assisted housing are an increasing percentage of tenant income as that income rises. Such a formula was proposed in 1970 by the Federal Department of Housing and Urban Development (HUD) for general application to Federal programs of housing assistance.

There are many possible variations within these general formulas, with respect to the measurement of tenant income, the cost of the housing offered, and the rates (percent of rent, percent of income) governing the division of cost between the tenant and the public treasury. For concreteness, we examine the workings of the specific programs cited above as examples, showing how the budgets of four-person families whose incomes varied from the welfare to the low-to-moderate level were affected by participation in these programs. This is done for two levels of housing: the actual level offered by these programs in 1968 (new or rehabilitated apartments whose full costs were about \$2,400 annually) and a hypothetical alternative (well-maintained older apartments whose full costs were about \$1,600 annually).

This analysis lends substance to broader conclusions about existing programs of rent assistance for residents of New York City. There are nearly a dozen such programs, though not all are designed to serve low-income families. They have three features in common:

1. Rent assistance is available only to the occupants of specified housing units under contract to the assisting agency. With minor exceptions, only newly constructed or rehabilitated housing has been eligible for such contracts.
2. Families with very low earned incomes have not been well served by these programs. They tend to be excluded by assistance formulas that put the minimum tenant contribution beyond their means.
3. All are token programs in the sense that only a small fraction of those families eligible to participate can be accommodated by program resources.

These features are interrelated. The high cost of new and rehabilitated housing requires a substantial public contribution for each family served, even though the tenant is required to pay as much or more rent than he did on the private market. Families with moderate incomes can more easily pay a substantial share of the cost of this high-quality housing, and program eligibility formulas reflect this fact. With program eligibility extending into the moderate income range—or even higher in some State and City programs—no level of government has been willing to vote the funds that would be needed to aid all or even most eligible families. To legitimate the selective conferral of benefits within a large class of eligible families, rent assistance is granted only to tenants of particular housing units that have been built or rehabilitated under contract to the assisting agency. Indeed, in several of the programs rent assistance seems almost incidental to the objective of adding to the stock of housing.

The obvious exception to these generalizations is the welfare program which in 1969 provided housing assistance for nearly 15 percent of all renter households

in New York City. Its effective standards of housing quality are minimal, it serves the poorest of the City's residents, and it is manifestly open to all eligible families. In mid-1969, the Department of Social Services contributed to the support of about 314,000 households living in rental quarters. About 18,000 of these paid no cash rent. The average gross rent paid by the remaining households was just under \$1,000 per year, of which the DSS contributed an average of 85 percent. Its total outlay for rent assistance approached \$250 million in 1969.

A program of housing assistance for households whose disposable incomes are above the welfare level but below the low-to-moderate level need not provide the high-quality, high-cost housing associated with existing token programs, nor need it cover as large a fraction of the rent as the welfare program does. For these households, we propose the following principles as guides in the design of a rent assistance formula:

1. Rent assistance should be available to all low-income families, not a lucky few.
2. Rent-assisted budgets should allow for rent expenditures adequate to cover the full costs of a low-to-moderate level of housing consumption.
3. Rent-assisted budgets should allow at least the level of nonhousing consumption acknowledged in welfare schedules as the publicly supported minimum.
4. Rent assistance schedules should not be designed so as to discourage those who can increase their incomes by gainful employment from so doing.
5. The amounts of rent assistance granted should be the minimum consistent with the first three principles.

We have devised a rent assistance formula which approximately satisfies these principles. For a household whose disposable income before assistance is equal to the welfare level of nonhousing consumption, it offers full rent assistance—i.e., a public contribution equal to the full cost of a well-maintained older apartment of adequate size. The amount of assistance decreases linearly to zero as disposable income increases to the low-to-moderate level. Basically, it is a sliding-percent-of-income formula, so constructed that the tenant contributes an increasing *percentage* of his disposable income toward the cost of his housing as his income rises, but he also retains a larger *dollar amount* to spend for nonhousing consumption.

For households whose disposable incomes before assistance are below the welfare level of nonhousing consumption, even full rent assistance would be inadequate to allow a welfare level of living. Such households, if not already on welfare, are logical candidates for an income maintenance, rather than a rent assistance program.

With respect to its impact on the budgets of low-income families supported by full-time employment, our formula does not differ greatly from the Federal rent supplements formula or that proposed by HUD in 1970 for all Federal programs, including public housing. Ours is less generous than these alternatives when applied

to families living on nontaxable pensions or social security, and it provides a smoother transition from income maintenance to rent assistance. In comparison with the rent-splitting formula of public housing, ours is more generous to families with very low disposable incomes and less generous to those whose disposable incomes approach the low-to-moderate level.

VIII. ESTIMATING THE COSTS OF COMPREHENSIVE RENT ASSISTANCE IN NEW YORK CITY

In the last two chapters, we have analyzed rent assistance programs mostly in terms of their consequences for the recipients, showing how family budgets were affected by various combinations of housing costs, eligibility criteria, and assistance formulas, including those of our own devising. This final chapter of our study examines the administrative and fiscal implications of a comprehensive rent assistance program, one that reflects the standards of housing quality and the "disposable income" criterion of ability-to-pay developed in Ch. VI, and a schedule of public contributions based on the rent assistance formula developed in Ch. VII.

Whether such a program should be undertaken by the City of New York (with or without Federal or State assistance) is, in the best sense of the word, a *political* question beyond our competence to decide. Many other worthy purposes compete for the City's limited administrative and fiscal resources. We hope only to provide a framework for public discussion, soundly based on analyses of need and of public cost.

Our estimates of caseloads and program costs are for 1968 because that is the most recent year for which we could assemble all the data needed for our calculations. Even so, we must use data from several sources whose comparability is compromised by differences in reporting methods and concepts, whose reliability differs, and whose reference dates vary from 1967 to 1969. While we have done our best to adjust and integrate these data, some inconsistencies and ambiguities remain. Still, our calculations will give the reader a reasonable idea of the scale of a comprehensive program of rent assistance in New York City, a benchmark against which alternatives may be compared.

As explained in Ch. VI, housing costs in New York City may be measured in two ways: in terms of controlled rent levels or in terms of "full costs." Recent changes in the City's rent control law are designed to diminish the differences between these two measures, but in 1968, we estimate that typical "full costs" for well-maintained rent-controlled housing exceeded typical rent ceilings by amounts ranging from less than 20 percent for small apartments to 40 percent for large apartments.¹ If ceiling rents then prevalent were used to measure the costs of

¹ See Ch. VI, "Estimating the Full Costs of Adequate Housing," especially Table 35.

adequate housing, the number of households needing assistance and the amounts of assistance needed would be considerably less than if our calculations assumed rents equal to the full costs of supplying well-maintained housing.

The latter approach has been followed in Chs. VI and VII, and will be followed here, so that our calculations in a limited sense reflect the new rent control law. This is not to suggest that our estimates of caseloads and costs could be bodily transferred to some future date in which a rent assistance program might conceivably be implemented. Both housing costs and household incomes have since changed; the last section of this chapter discusses these changes and their implications, albeit only in general terms.

In Vol. I of this series, we presented some preliminary estimates of caseloads and costs of a rent assistance program.² The estimates presented here differ from those in Vol. I for a variety of reasons, the most important being that we have improved upon our earlier criteria of ability-to-pay and we now have better data on the full costs of well-maintained housing. The differences are discussed in Appendix G.

EXISTING PROGRAMS: CASELOADS AND COSTS IN 1968

Any speculation on the possibility of broadening the public role in housing in New York City should begin by acknowledging that Federal, State, and City governments already contribute a phenomenal amount of money for this purpose. In Fiscal 1968, public capital investment in housing and urban renewal programs, including all programs and all levels of government, amounted to about \$343 million. Public contributions to annual operating costs amounted to \$391 million in direct payments and \$71 million in real estate tax abatements and exemptions, for a total of \$462 million. Combining investment and operating costs yields an estimate of the annual flow of public funds into the City's housing and renewal programs of nearly \$806 million for Fiscal 1968.³

Of course, the capital investments made in a given year should not be accounted as program costs for that year; in general, capital costs are subsequently reflected in debt service which is included in our estimate of \$462 million in annual public contributions to program operations. Of this amount, about \$128 million was contributed by the Federal government, \$131 million by the State government, and \$204 million by the City government (including the value of real estate tax exemption). We know of no other city in the United States where government plays so large a role in the housing market or where local government accounts for so large a share of public spending for housing.

² Ira S. Lowry (ed.), *Confronting the Crisis*, RM-6190-NYC, The New York City - Rand Institute, February 1970, pp. 34-37.

³ David Dreyfuss and Joan Hendrickson, *A Guide to Government Activities in New York City's Housing Markets*, RM-5673-NYC, The Rand Corporation, Santa Monica, November 1968, Ch. IX, especially Tables 57 and 58.

Still, our present concern is with rent assistance for low-income families, and by no means all public expenditure for housing and urban renewal has this objective. The principal vehicles for such assistance in 1968 were the welfare program, which combines rent assistance with allowances for nonhousing consumption; and the New York City Housing Authority (NYCHA), which offers rental housing to eligible tenants at rents well below its full costs. There are other programs aimed at low-income families, but they are quite small in scale.⁴

Our best data on the welfare program indicate that in mid-1969 the City's Department of Social Services provided rent assistance for about 296,000 renter households whose gross rent expenditures averaged just under \$1,000 annually. DSS contributed an average of 85 percent of this amount, for a total of \$250 million in Calendar 1969.

We adjusted these data to Calendar 1968 in order to compare them with data from the Housing and Vacancy Survey of that year. Table 42 shows our necessarily rough estimates of the numbers of welfare households of each size receiving rent assistance from DSS in 1968, together with the public cost of this assistance. We also show how much more would have been required to pay the full cost, rather than the controlled rent, of housing that met Community Council standards of space and quality.

We estimate that in 1968 the welfare program provided rent assistance to some 240,000 households at an annual public cost of \$210 million, an average of \$875 per household. To raise gross rent allowances enough to cover the full cost of our low-to-moderate housing standard for each household size would have required an additional \$89 million annually, about \$410 per household, excluding those living in public housing.

Table 43 lists the other low-income rent assistance programs active in New York City in Fiscal 1968. The public housing programs administered by NYCHA accounted for 144,000 out of 149,000 assisted households. Contributions by Federal, State, and City governments to these public housing programs amounted to about \$112 million, or \$775 per assisted household; the tenants paid about the same amount toward the cost of their housing.⁵

Though some of the other programs have since grown and a new Federal program of interest-rate subsidies (Sec. 236) was started in 1969, in Fiscal 1968 all were trivial in size, providing about \$2.5 million in rent assistance to some 5,300 households, about \$470 per household.

For all the programs in Table 43, the housing provided to assisted families would have met the Community Council's standards of space and quality, and its full

⁴ We exclude from this account the limited-profit (Mitchell-Lama), limited-dividend, and redevelopment company programs listed with other rent assistance programs in Table 25 of Ch. VI because these are aimed at (and in fact serve) middle- and upper-income families rather than low-income families. We also exclude the loosely targeted J-51 and municipal loan programs.

⁵ In 1968, about 23,700 welfare households lived in public housing. For these, DSS rent allowances covered only the scheduled contract rent, so that about half of the rent assistance to these families was channeled through DSS and half through NYCHA. Subsequently, a change in Federal regulations permitted NYCHA to charge higher rents to welfare families than to other families, shifting more of the costs to DSS.

Table 42

PUBLIC COSTS OF WELFARE RENT ASSISTANCE AND ADDITIONAL NEED,
BY SIZE OF HOUSEHOLD: NEW YORK CITY, 1968

Persons per Household	Thousands of Households Assisted ^a	Median Annual Assistance Payment (\$)			Annual Public Cost (\$ millions)		
		Existing Program ^b	Additional Need ^c	Total	Existing Program ^d	Additional Need ^e	Total
1	87.0	715	360	1,075	62.2	28.7	90.9
2	38.9	860	340	1,200	33.5	12.1	45.6
3	35.4	920	420	1,340	32.6	13.5	46.0
4	27.6	960	470	1,430	26.5	11.5	38.1
5	19.4	1,005	520	1,525	19.5	8.8	28.3
6	12.4	1,050	560	1,610	13.0	6.0	19.0
7	8.4	1,090	570	1,660	9.2	4.1	13.3
8+	11.2	1,260	420	1,680	14.1	4.0	18.1
All sizes	240.3	876	410 ^e	1,246	210.5	88.7	299.5

SOURCES: Tabulations prepared by the Bureau of the Budget from records of the Department of Social Services (DSS), Human Resources Administration, for 1 July 1969; and Table 36.

NOTE: Distributions may not add exactly to totals because of rounding.

^a All households containing one or more persons receiving rent assistance from DSS. Welfare recipients under institutional care and those paying no cash rent are excluded. Household counts for 1 July 1969 were reduced by 19 percent to reflect changes in DSS caseloads between May 1968 and July 1969.

^b Public costs, estimated as follows: median contract rent paid by welfare households in July 1969, plus estimated utility costs, reduced by 15 percent (the average percentage of a welfare household's income derived from sources other than DSS payments).

^c Public cost estimated as follows: difference between estimated full-cost gross rent (Table 36) and median gross rent paid by welfare households.

^d Product of entries in Cols. 1 and 2, treating median assistance payment as though it were an arithmetic average. In these tightly clustered distributions, medians and averages are not significantly different.

^e Excludes an estimated 23,700 welfare households living in public housing in 1968.

costs were covered by tenant and public contributions. As we have noted, the rent-splitting formula used by the public housing programs does a less-than-perfect job of distributing rent assistance according to need, so that some of NYCHA's low-income tenants probably needed additional assistance by the criteria developed in Ch. VII.⁶ For present purposes, we will overlook this discrepancy.

Combining the data in Tables 42 and 43, we conclude that rent assistance was provided in 1968 for about 366,000 households at an annual public cost of \$325 million, or about \$887 per household.⁷ Another \$89 million would have been needed to enable welfare households to pay the full costs of a low-to-moderate level of housing. Against this backdrop, we now consider the public cost of extending rent assistance to low-income households not aided by these programs.

⁶ This situation was partly remedied in 1969 by an amendment to the Federal program limiting tenant rent payments to 25 percent of adjusted gross income and providing additional subsidies for households affected by this rule. See Ch. VII, "Rent Assistance under Three Federal Programs."

⁷ The household average is larger than any of its components because some 23,700 of these households were assisted by both DSS and NYCHA.

Table 43

PUBLIC COSTS OF EXISTING LOW-INCOME RENT ASSISTANCE,
BY PROGRAM: NEW YORK CITY, FISCAL 1968

Program	Thousands of Households Assisted	Public Cost	
		Per Household (\$)	Total (\$ millions)
New York City Housing Authority:			
Federal program	64.0	925	59.2
State program	52.1	854	44.5
City program	28.0	286	8.0
Federal interest subsidies:			
Sec. 221(d)(3) BMIR	3.5	429	1.5
Sec. 236	(a)	(a)	(a)
Direct rent assistance:			
Federal rent supplements	1.1	455	.5
State low-rent assistance	.7	714	.5
Total, all programs	149.4	764	114.2
Total, excluding welfare clients	125.7		

SOURCE: David Dreyfuss and Joan Hendrickson, *A Guide to Government Activities in New York City's Housing Markets*, RM-5673-NYC, The Rand Corporation, Santa Monica, November 1968, Table 58.

NOTE: Public cost includes direct contributions to program operating costs and the estimated value of real estate tax exemptions where applicable. Distributions may not add exactly to totals because of rounding.

^a Federal legislation establishing the Sec. 236 program was passed in mid-1968; no units were completed under this program in either Fiscal or Calendar 1968.

EXTENDING ASSISTANCE TO ALL LOW-INCOME HOUSEHOLDS

Estimating the Numbers of Eligible Households

In Ch. VII, we identified 673,000 households whose gross incomes, as reported by the Housing and Vacancy Survey of 1968, implied that they were unable to afford a low-to-moderate level of living (see Fig. 31 and Appendix Table F-4). This count excluded some 240,000 welfare households and about 126,000 nonwelfare households already receiving rent assistance.

We have proposed a formula for rent assistance in which the amount of assistance provided for a household of a particular size depends on a comparison of its disposable income with a modified welfare budget on the one hand and a low-to-moderate budget on the other. However, our source of data on household incomes reports only gross incomes, which may differ substantially from disposable incomes for households supported by current earnings of one or more members. In order to estimate the costs of rent assistance implied by our formula, we first had to estimate disposable incomes corresponding to reported gross incomes.

In the estimates presented below, we have assumed that gross incomes below the minimum full-time wage (\$3,200) were derived from nontaxable transfer payments and that their recipients had no work-related expenses. When this is true, gross and disposable incomes are identical. Of course, it is possible that such incomes represent earnings from part-time or temporary employment, and to the extent that this is so, we will have overstated disposable incomes.

We assume that gross incomes greater than \$3,200 represent taxable earnings of one employed family member who also incurs work-related expenses of \$650 to \$750 annually. To calculate disposable incomes for such households, we subtracted their estimated income and social security taxes as well as work-related expenses for one employed person. This procedure also produces errors. Some retired persons and couples have nontaxable incomes from pensions that exceed \$3,200. Some households are supported by two or more employed members, each of whom incurs work-related expenses and social security taxes. Nonetheless, this arbitrary rule is the best we can do with the data at hand.

Following these rules leads to the conclusion that nearly 32,500 households included in Fig. 31 would not in fact have been eligible for rent assistance under our low-to-moderate disposable income criterion. These are one-person households whose reported gross incomes were less than \$3,200 (therefore assumed to be completely "disposable") but more than \$2,600 (the low-to-moderate level of disposable income for single persons). For all larger household sizes, the low-to-moderate level of disposable income is greater than \$3,200, so the estimates shown in Fig. 31 are correct by the rules stated above.

Estimating the Amounts of Assistance Needed

To determine the appropriate rent assistance calculation for each of the remaining 640,000 households qualifying under our low-to-moderate disposable income criterion, we have divided them into two groups, as follows:

Group I. Households whose disposable incomes were so small that even full rent assistance would not enable them to reach the modified welfare level of living.

Group II. Households whose disposable incomes were (a) large enough so that partial-to-full rent assistance would enable them at least to reach our modified welfare level of living, but (b) too small to enable them to attain a low-to-moderate level of living without some rent assistance.

Households in the first group need more financial aid than could be supplied through the medium of rent assistance; they are really candidates for a general income maintenance program that would bring them up to the modified welfare budget. Households in the second group are more logical candidates for a rent assistance program, since rent assistance alone would be capable of meeting their maximum need for budgetary supplements.

The procedures by which we assigned the 640,000 households to these two groups and estimated the amounts of rent assistance they needed are explained in Appendix G. Here, we show only the outcomes. Tables 44 and 45 deal with the first group and Table 46 deals with the second.

Table 44

PUBLIC COSTS OF RENT AND OTHER ASSISTANCE FOR HOUSEHOLDS OF GROUP I,
ASSUMING FULL RENT ASSISTANCE: NEW YORK CITY, 1968

Persons per Household	Thousands of Eligible Households	Annual Amount Needed To Reach Modified Welfare Budget					
		Per Household (\$)			All Households (\$ millions)		
		Full Rent Assistance	Other Consumption	Total	Full Rent Assistance	Other Consumption	Total
1	22.9	1,200	415	1,615	27.5	9.5	37.0
2	15.6	1,350	625	1,975	21.1	9.8	30.8
3	9.7	1,500	890	2,390	14.6	8.6	23.2
4	7.1	1,600	1,185	2,785	11.4	8.4	20.0
5	10.5	1,700	1,133	2,819	17.7	11.9	29.6
6	7.4	1,800	1,324	3,108	13.4	9.8	23.0
7	4.7	1,850	1,276	3,128	8.7	6.0	14.7
8+	7.6	1,900	1,671	3,579	14.5	12.7	27.2
All sizes	85.5	1,509	897	2,404	128.9	76.7	205.5

SOURCES: Appendix Tables F-4 to F-6.

NOTE: Group I consists of households not receiving assistance in 1968 whose disposable incomes were so small that even full rent assistance would not enable them to reach the modified welfare level of living. For each size of household, the table shows full rent assistance and the average amount of aid for other consumption needed to cover the modified welfare budget specified in Appendix Table F-4.

Table 45

PUBLIC COSTS OF ASSISTANCE FOR HOUSEHOLDS OF GROUP I, PRORATED
BETWEEN RENT AND OTHER CONSUMPTION: NEW YORK CITY, 1968

Persons per Household	Thousands of Eligible Households	Annual Amount Needed To Reach Modified Welfare Budget					
		Per Household (\$)			All Households (\$ millions)		
		Rent Assistance	Other Consumption	Total	Rent Assistance	Other Consumption	Total
1	22.9	955	660	1,615	21.9	15.1	37.0
2	15.6	1,026	949	1,975	16.0	14.8	30.8
3	9.7	1,094	1,296	2,390	10.6	12.6	23.2
4	7.1	1,123	1,662	2,785	8.0	11.8	20.0
5	10.5	1,028	1,791	2,819	10.8	18.8	29.6
6	7.4	1,055	2,053	3,108	7.8	15.2	23.0
7	4.7	980	2,148	3,128	4.6	10.1	14.7
8+	7.6	988	2,591	3,579	7.5	19.7	27.2
All sizes	85.5	1,020	1,381	2,404	87.2	118.1	205.5

SOURCES: Table 44 and Appendix Table F-4.

NOTE: Group I consists of households not receiving assistance in 1968 whose disposable incomes were so small that even full rent assistance would not enable them to reach the modified welfare level of living. In contrast to Table 44, total assistance per household is here allocated between rent and other consumption so that public costs are the same percentage of the budgetary allowance for each item, as specified in Appendix Table F-4.

Table 46

PUBLIC COSTS OF PROPOSED RENT ASSISTANCE FOR HOUSEHOLDS
OF GROUP II: NEW YORK CITY, 1968

Persons per Household	Thousands of Eligible Households	Annual Amount of Assistance Proposed	
		Per Household (\$)	All Households (\$ millions)
1	140.9	430	60.6
2	185.6	585	108.6
3	89.3	728	65.0
4	74.6	840	62.7
5	42.8	874	37.4
6	18.0	900	16.2
7	3.3	909	3.0
8+	0.3	933	2.8
All sizes	554.8	642	356.3

SOURCES: Appendix Tables F-4, F-7, and F-8.

NOTE: Group II consists of households not receiving assistance in 1968 whose disposable incomes were large enough so that rent assistance alone would have been adequate to enable them to reach the modified welfare level of living, but who could not afford the low-to-moderate level of living without some aid. (These budgets are specified in Appendix Table F-5.) For each size of household, the table shows the average amount of assistance provided by the formula given in the preceding section of this chapter.

Looking first at Table 44, we estimate that in 1968 there were nearly 86,000 households whose disposable incomes were so small that even full rent assistance would not have enabled them to reach the level of living provided by our modified welfare budget. About 80 percent of the households in this group reported gross incomes under \$3,200; despite very low incomes, these households were not on welfare in 1968.⁸

Our objective for these households is to provide income supplements just large enough to bring all of them up to the modified welfare budget for the appropriate household size. The fourth column of Table 44 shows the average amounts needed for each household size, ranging from \$1,615 for single persons to \$3,579 for eight or more, with an overall average of \$2,404.

⁸ Nearly all would have qualified on grounds of need even under the less generous (as compared with our modified welfare budget) allowances then in effect. As the reader can see from Appendix Table F-3, 106,000 households of one or two persons and 59,000 households of three or more persons reported gross incomes below the median welfare allowance for their household size. (These figures, of course, exclude households already on welfare or living in public housing.) Our Group I accounts for about half of these presumptive welfare-eligible households. The others are included in Group II, their reported incomes being large enough so that partial-to-full rent assistance could at least bring them up to the modified welfare budget.

There are indications that many of these households have since moved onto the welfare rolls, which increased by about 65,500 households in the 14 months between May 1968 and July 1969.

For all households included in Group I, the amounts of assistance needed exceed the full cost of our low-to-moderate level of housing, the excess increasing with household size, as shown in the third column. The table shows what would happen if full rent assistance were provided: public costs for this purpose would amount to nearly \$129 million. Assistance for nonhousing consumption would cost nearly \$77 million.

But this division of public costs between rent and other assistance is arbitrary. In our computations for the existing welfare program, we assumed that when DSS provided 85 percent of total income, it was providing 85 percent of the rent and 85 percent of nonhousing consumption allowances. Applying the analogous rule here, where incomes before assistance are typically larger than those of welfare clients, leads to the conclusion that the households enumerated in Table 44 need an average of \$1,020 apiece in rent assistance and \$1,381 in other assistance; total public costs would then divide into \$87 million in rent assistance and \$118 million in other assistance. Details by size of household are shown in Table 45.

Whichever system of accounting one prefers, the total public cost of bringing the disposable incomes of Group I households up to the modified welfare budget amounts to \$200 million annually.

Table 46 deals with households of Group II, whose disposable incomes were such that rent assistance alone would have been adequate to raise them to the modified welfare level of living, but who could not afford the low-to-moderate level of living without some aid. We estimate that in 1968 there were 555,000 households in this group not then receiving assistance. Most of these were small households, 59 percent consisting of one or two persons. About two-fifths of these one- and two-person households reported gross incomes under \$3,200; we assume most of these (and probably some with larger incomes) to be elderly pensioners. We feel fairly sure that nearly all of the 230,000 larger households derived their incomes from gainful employment; their earnings were simply inadequate to support their families at a low-to-moderate level of living.

The households of each size are distributed over a range of disposable incomes. For each size of household, our rent assistance formula provides for a diminishing public contribution to gross rent as disposable income increases. For a given disposable income, it provides more aid for large households than for small ones. In the second column of Table 46, we have estimated the average amount of aid to be provided for households of each size.

Households of one to three persons in this group tend to be concentrated in the upper end of the range of eligible incomes, so that their average needs for rent assistance are relatively modest, varying from 35 to 43 percent of our standard gross rents. Because they are so numerous, however, they account for nearly two-thirds of all rent assistance costs for Group II households. The larger households are more evenly distributed over the range of eligible incomes, so that their needs for rent assistance all average about 50 percent of our standard gross rents. The total cost of rent assistance for households in Group II is estimated to be \$356 million, about \$642 per household.

THE COMPREHENSIVE PROGRAM: CASELOADS AND COSTS IN 1968

We have combined our estimates of the 1968 caseloads and public costs of existing and proposed programs of rent assistance for low-income households in Tables 47 and 48. Here, we have grouped the data by type of program, showing separate totals for those cases in which rent assistance is more logically conceived as part of a broader income maintenance program and for those cases in which only rent assistance was given or is suggested.

Table 47 shows caseloads. Under the heading of "Income Maintenance Programs," we have included households on welfare in 1968 and those not on welfare but whose income deficiencies were too great to be remedied by rent assistance alone (Group I). The combined total for income maintenance programs is 326,000 households, about half of them consisting of one or two persons.

Under the heading of "Rent Assistance Programs," we have combined households receiving such aid in 1968—almost all of them public housing tenants—with those who would have been eligible had our rent assistance formula then been in effect (Group II). The combined total for rent assistance programs is 704,000 households; again, about half consist of one or two persons.

Table 47

NUMBERS OF LOW-INCOME HOUSEHOLDS COVERED BY EXISTING AND PROPOSED PROGRAMS OF HOUSING ASSISTANCE, BY TYPE OF PROGRAM: NEW YORK CITY, 1968

Persons per Household	Thousands of Households by Type of Program							
	Income Maintenance Programs			Rent Assistance Programs			Grand Total	
	Welfare ^a	Group I Proposal	Total	Public Housing and Other ^a	Group II Proposal	Total	All Programs ^a	Net of Double-Counting ^b
1	87.0	22.9	109.9	24.7	140.9	165.6	275.5	268.2
2	38.9	15.6	54.5	27.8	185.6	213.4	267.9	264.6
3	35.4	9.7	45.1	26.1	89.3	115.4	160.5	157.3
4	27.6	7.1	34.7	33.0	74.6	107.6	142.3	139.2
5	19.4	10.5	29.9	18.4	42.8	61.2	91.1	88.7
6	12.4	7.4	19.8	10.2	18.0	28.2	48.0	46.4
7	8.4	4.7	13.1	4.2	3.3	7.5	20.6	19.4
8+	11.2	7.6	18.8	5.1	0.3	5.4	24.2	22.6
All sizes	240.3	85.5	325.8	149.4	554.8	704.3	1,030.1	1,006.4

SOURCES: Tables 42, 43, 45, and 46, with additional data on public housing tenants from tabulations of the New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding.

^a Includes 23,700 welfare households living in

public housing, and 5,300 households aided by other programs, distributed to household size in proportion to the distribution of households in public housing.

^b Excludes welfare households also counted as public housing tenants.

Table 48

PUBLIC COSTS OF EXISTING AND PROPOSED PROGRAMS OF HOUSING ASSISTANCE,
BY TYPE OF PROGRAM: NEW YORK CITY, 1968

Persons per Household	Annual Public Cost of Housing Assistance by Type of Program (\$ millions)								
	Income Maintenance Programs			Housing Assistance Programs		All Programs			
	Welfare ^a	Group I Proposal ^b	Total	Public Housing and Other ^c	Group II Proposal	Total	Provided by Existing Programs	Needed for Program Expansion ^d	Grand Total
1	90.9	21.9	112.8	18.8	60.6	79.4	81.0	111.2	192.2
2	45.6	16.0	61.6	21.2	108.6	129.8	54.7	136.7	191.4
3	46.0	10.6	56.6	20.0	65.0	85.0	52.6	89.1	141.7
4	38.1	8.0	46.1	25.2	62.7	87.9	51.7	82.2	133.9
5	28.3	10.8	39.1	14.0	37.4	51.4	33.5	57.0	90.5
6	19.0	7.8	26.8	7.8	16.2	24.0	20.8	30.0	50.8
7	13.3	4.6	17.9	3.2	3.0	6.2	12.4	11.7	24.1
8 +	18.1	7.5	25.6	3.9	2.8	6.7	18.0	14.3	32.3
All sizes	299.5	87.2	386.5	114.2	356.3	470.4	324.7	532.2	856.9

SOURCES: Tables 42, 43, 45, and 46, with additional data on public housing tenants from tabulations of the New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding.

^a Includes \$89 million above 1968 allowances, needed to cover full costs of low-to-moderate standard of housing.

^b Prorated rent assistance from Table 45.

^c Includes about \$21 million for 23,700 welfare households living in public housing and \$2.5 million for 5,300 households assisted under programs other than public housing.

^d Includes Group I, Group II, and \$89 million additional for households on welfare in 1968.

After netting out 23,700 welfare households who were also public housing tenants, we find that the grand total for all programs amounts to 1,006,000 households—about 36 percent of all households and 48 percent of all renter households in New York City in 1968. It should not be surprising that a program addressed to all those with disposable incomes below the low-to-moderate level encompasses a third of the City's households. *However, only three-fourths of those qualified by our disposable income criterion for income maintenance and one-fourth of those qualified for rent assistance were actually served by such programs in 1968.*

The incomplete coverage of the welfare program is particularly striking, since assistance is mandated by law for all eligible applicants. However, this situation seems to be changing. Since 1968, welfare caseloads have grown substantially, and the available evidence, while less than conclusive, suggests that most of the growth is accountable to greater use of the program by residents rather than to new arrivals.⁹ Some of the new cases were doubtless households on fixed incomes feeling the pinch of inflation; others perhaps had long been eligible but were only recently converted to the view that accepting public assistance is not shameful. Unfortunately, we know all too little about the reasons for and sources of recent changes in the City's welfare population.

The reason for limited participation in rent assistance programs is quite clear: Only a limited number of "places" were funded, and all of these were filled. The New York City Housing Authority, the only large-scale channel of rent assistance in 1968, had only turnover vacancies and a waiting list at least as large as the existing tenant population. Apparently, the list would have been even longer except that the Authority stopped accepting applications which it saw no prospect of accommodating.

Beyond the direct evidence that the public housing program could have easily doubled its caseload, it is not easy to guess how many households in Group II would have applied for rent assistance had it been available in 1968. We would suppose that the terms and conditions of assistance would be important in determining response, especially among those close to the upper limit of eligibility. Some who would be more than pleased to be helped with the rent on their present quarters would be less enthusiastic about moving to a different neighborhood or into a "project." Others, for whom the amount of assistance offered was small, would be reluctant to submit to income verification or other administrative impositions even if free choice of residence were allowed.

The total caseload shown in Table 47 can also be interpreted as an approximate upper limit of those eligible under existing programs. Our low-to-moderate disposable income criterion of eligibility is no more generous than are the rules of public housing or Federal rent supplements, although details differ and marginal cases would be treated differently by each program. More important differences arise with respect to the amounts of rent assistance scheduled by our formula for families of a given size and income.

The fiscal implications of existing and expanded programs are summarized

⁹ See "Public Assistance as a Source of Income" in Ch. III, especially Table 10 and Footnote 11.

in Table 48, again for the benchmark year of 1968. Here, we show the amounts of assistance needed for the households enumerated in Table 47, assuming that each pays the full cost of a low-to-moderate level of housing and lives at least as well in other respects as a family on welfare.

Under "Income Maintenance Programs," we show the amounts of rent assistance needed by welfare and Group I households in 1968: about \$386 million. For welfare households, this includes \$89 million more than was actually paid to them by DSS in 1968, our estimate of what would have been needed to cover the full costs of our low-to-moderate level of housing. For both welfare and Group I households, income maintenance requires more than rent assistance, and we have prorated public costs (and tenant contributions) between rent and other consumption. The full gross rent allowance for these families, as distinguished from public costs of rent assistance under that accounting convention, would have been about \$352 million for welfare households and \$129 million for Group I households, for a total of \$481 million.

Under "Housing Assistance Programs," we show a total public cost of nearly \$470 million, about a quarter of which was incurred by programs in operation in 1968, with the rest required for extension of the programs to encompass Group II households under our rent assistance formula.

In the last three columns of the table, we combine the rent assistance components of income maintenance programs with the costs of "pure" rent assistance programs, distinguishing between public costs actually incurred in 1968 and those that would have been added by the indicated extensions of the program. We estimate that costs actually incurred amounted to nearly \$325 million, and program extension would have required an additional \$532 million, for a grand total of nearly \$857 million for a general program of rent assistance, encompassing all households eligible under our low-to-moderate disposable income criterion.

FISCAL IMPLICATIONS AND QUALIFICATIONS

Eight hundred and fifty-seven million dollars for rent assistance is a lot of money, about 33 percent of the \$2.6 billion spent for rent by residents of New York City in 1968. So is \$532 million, the estimated public cost of expanding existing programs to provide all low-income families with reasonably spacious and comfortable quarters in well-maintained older buildings, even though the full costs of such housing would be only about two-thirds those of the new and rehabilitated housing provided for a few such families by existing programs of rent assistance.

There are a number of reasons to expect that the *net* public costs of such a program would be considerably less than these figures indicate. One is that the household income data on which our estimates are based probably understate actual income,¹⁰ although a similar tendency would no doubt be a problem in the adminis-

¹⁰ See Appendix B.

tration of such a program. A second is that a substantial number of apparently eligible households would not participate in such a program; this at least is the experience of those administering welfare, old age assistance, and unemployment compensation.¹¹

The first point implies that public costs of a comprehensive program in 1968 would have been below our estimate, though we are unable to say by how much. The second implies that normal administrative procedures would not be adequate to create a comprehensive program; some eligibles, through choice or ignorance, would forego assistance and suffer the consequences of inferior housing or skimpy budgets for nonhousing consumption.

Even assuming that our income data and estimating methods were completely reliable, and that all eligibles were recruited into such a program of rent assistance, there is an important fiscal mechanism that would automatically reduce *net* public costs below our estimates: the real estate tax. In 1968, real estate tax revenues from rental property in New York City amounted to about \$600 million, nearly a fourth of rental revenues for the year. If rent expenditures increased as a consequence of rent assistance, real estate tax revenues would also increase unless the tax rate were lowered or assessment practices were changed to prevent this from occurring. Since the tax rate is set each year by the City's Board of Estimate, and assessments are determined by the City's Real Property Assessment Department, both elements are under direct City control.

Our analysis of data from 311 rent-controlled buildings whose applications for hardship rent increases were processed in 1967 and 1968 shows that, under present assessment practices, assessed values of multiple dwellings systematically reflect their rental incomes, increasing by \$5 for each additional dollar of rent.¹² With the tax rate on assessed value now running over 5 percent, this relationship implies that City tax revenues would increase by at least 25 cents for each added dollar of rental revenue.

In other words, if rent assistance in the amount of \$532 million is applied to privately owned rental housing as a net increase in rent expenditures by residents of New York City, real estate tax revenues ought to increase by nearly \$133 million. The net public cost of program expansion would then be \$399 million.¹³

¹¹ For welfare participation versus eligibility, see Fig. 8 in Ch. III.

¹² Specifically, we found that, at the time these buildings filed for hardship increases, assessed value (AV) was related to rental income (RI) as follows:

$$\begin{aligned} AV &= \$4,835 + 5.05 \text{ RI.} \\ &(\$2,590) \quad (.03) \end{aligned}$$

The equation is an excellent estimator, with a low coefficient of variation ($C_V = .101$) and a high coefficient of determination ($R^2 = .989$). See Appendix E for a description of the sample on which the analysis was performed.

¹³ As an interesting sidelight, we note that rent assistance funded by Federal and State governments is fiscally profitable to the City government. In the existing welfare program, where costs are shared by the three levels of government, the City's net contribution to rent assistance is, by this calculation, very small. It contributes about 30 percent of the assistance dollars paid by DSS and recaptures about 25 percent of these dollars in real estate taxes. Of course, the City also contributes to the nonhousing portion of welfare payments, and these contributions are not so neatly recaptured.

How much of a given rent assistance grant *would* show up as increased rent expenditures depends very much on the form in which such a grant is delivered and on the effectiveness of restrictions imposed on its use. For some recipients (especially for large low-income households), the rent assistance formula proposed in this chapter clearly implies reductions in the amounts they contribute toward the cost of their housing as well as improvements in its quality or spaciousness; in other words, the rent assistance schedule was designed to free more of their disposable incomes for nonhousing consumption. Others, protected by rent control in 1968, were spending adequately for nonhousing consumption but were paying less than the full costs of the housing they occupied; if ceiling rents were raised, few program restrictions would be required to channel their rent assistance into housing expenditures.

Neither is it clear how quickly rent-assisted families would be able to find well-maintained apartments of the sizes specified by our space standard. We would expect building owners to respond rather promptly to increased effective demand on the part of low-income families by improving the quality of existing housing, especially if rent assistance were made strictly conditional on occupancy of violation-free housing. It would be more difficult for the market to meet our space standards of one room plus one room per person; even though the 1968 housing inventory contained enough apartments of each size to accommodate nearly all families in apartments of the sizes we have specified for them, this outcome would require an improbable amount of movement within the stock and would be further constrained by tenant preferences for particular locations and types of housing.¹⁴

These qualifications all apply to the situation as of 1968. Subsequent events would, of course, change caseloads and costs; while these events are not well enough documented to allow appraisal of net consequences, we can at least discuss them generally.

First, the costs of both housing and other consumption have increased since 1968, and we anticipate that they will increase further over the years ahead. However, housing costs will rise much less rapidly than they did between 1965 and 1970. The reason is a simple one: About half the increase in the costs of supplying rental housing during the last half of the 1960s is attributable to rising interest rates, reflected both in debt service on mortgages contracted during the period and in the competitive rate of return on owner's equity. Interest rates have at long last begun to fall; we are not prepared to guess how far they will fall in the next few years, but think it extremely unlikely that they will rise above their 1969-1970 peak. Even if inflation of maintenance and operating costs continues at its recent pace, and real estate tax rates rise, the rate of increase in total costs will be cut roughly in half.

Still, any amount of inflation implies that, over time, the disposable income needed to support a low-to-moderate standard of living will rise. The critical question is whether the incomes of the City's households will rise commensurately.

In Ch. III, we have shown that since 1950, money incomes *have* risen faster than prices, so that real incomes have increased substantially despite population

¹⁴ The 1968 distribution of housing units by size is compared with the distribution of households by size in Ch. V's section on "Size of Apartment." See especially Table 22 for the results of a hypothetical reallocation.

changes which have, if anything, reduced the average skill level and employability of the City's labor force. In the past 3 years, wages and prices have increased at about the same rate, so that the real wage has been practically unchanged; however, selective income-reduction has resulted from layoffs and shorter hours as the unemployment rate has risen.

Recent wage settlements in key industries make it clear that we can expect rising wage rates over the next few years; less clear is the amount of unemployment we should anticipate. On the whole, we are inclined to expect real incomes in New York City to rise; we certainly doubt that they will fall.

Finally, Congress recently changed Federal income tax schedules for low-income households so as to reduce their tax burdens in several steps over the next several years. The surtax of 1968-1970 has also expired. This implies more disposable income per dollar of earned income.

Balancing the expectation of more slowly rising housing costs and more rapidly rising incomes, we conclude that the number of households in need of rent assistance under our low-to-moderate disposable income criterion is more likely to decline than to rise; and that the amounts of assistance needed will also decline. Our crystal ball does not tell us by how much.

Even so, our calculations for the bench-mark year of 1968 make it clear that a general program of rent assistance that fulfills the implied promise of existing token programs would entail major administrative and fiscal burdens. We have tried to construct a program with internally coherent logic, based on our best understanding of public purpose in housing policy, and to show its fiscal implications as honestly as we can. It is the reader's prerogative to judge whether the public benefits of such a program outweigh its public costs.

SUMMARY

In this chapter, we present estimates of the public costs and caseloads associated with a comprehensive rent assistance program for New York City, one that would enable all low-income families to afford adequate housing without depriving themselves of a modest standard of living in other respects.

Our estimates are for 1968, the most recent year for which we could assemble all the data needed for our calculations. They reflect the standards of housing quality and the "disposable income" criterion of ability-to-pay developed in Ch. VI; a schedule of public contributions based on the rent assistance formula developed in Ch. VII; and our estimates of the full costs in 1968 of well-maintained older housing rather than the ceiling rents current at that time.

In 1968, rent assistance was provided to about 366,000 households in New York City; about 240,000 of these were welfare clients for whom rent assistance was part of an income-maintenance grant. The public cost of rent assistance granted to these households in 1968 was about \$325 million, shared by Federal, State, and City governments.

We estimate that another 640,000 households would have qualified either for income maintenance or rent assistance under our low-to-moderate disposable income criterion. Program expansion to include these households and to raise housing standards for households already on welfare would have cost about \$532 million in 1968. This figure includes about \$175 million for households eligible for or then receiving welfare payments and \$356 million for partial rent assistance to other low-income households.

Although we have not attempted to project these caseloads and costs into the future, we may note that since 1968 there has been a considerable increase in the welfare rolls, presumably absorbing many of those eligible in 1968 but not then enrolled. So far as we can evaluate recent and near-term future changes in household income, housing costs, and other consumer prices, we are inclined to believe that the number of households needing partial rent assistance by our criterion, and the amounts they need, are not growing and may be shrinking.

Finally, we note that a built-in fiscal mechanism, the City real estate tax, would recapture about a fourth of any increase in rent expenditures resulting from program expansion. *Net* public costs would therefore be considerably less than the \$532 million of public contributions, perhaps as low as \$400 million.

That is still a large sum. It is the reader's prerogative to judge whether the public benefits of an expanded program of rent assistance would outweigh its public costs. Our task has been to inform that judgment without preempting it; we hope that we have succeeded.

Appendix A

SUPPLEMENTARY DATA ON POPULATION CHANGES AND HOUSEHOLD FORMATION

Table A-1 presents various estimates of the population of New York City between 1960 and 1970. In our judgment, all were prepared by responsible analysts. It is therefore sobering to note the amount of variation among estimates for a given year and the inconsistencies of direction and magnitude of year-to-year changes indicated by the different series.

THE 1960 CENSUS OF POPULATION

The U.S. Bureau of the Census found 7,782,000 residents of New York City in the course of the decennial census enumeration for 1960. Although this figure serves as a benchmark for most of the other estimates in Table A-1, it is almost surely an underestimate. Evidence for the nation as a whole indicates that the 1960 Census of Population undercounted by about 3.0 percent.¹ Those who were missed tended to be persons whose living arrangements were irregular or impermanent; a high proportion were nonwhites. For urban areas, one study indicates that the following expansion factors are required to compensate for undercounting in the 1960 census:

Whites	1.0012
Negroes	1.1496
Other races.....	1.2139 ²

¹ Jacob S. Siegel and Melvin Zelnik, "An Evaluation of Coverage in the 1960 Census of Population by Techniques of Demographic Analysis and by Composite Methods," *Proceedings of the Statistical Association, Social Statistics Section*, 1966, pp. 71-85.

² U.S. Bureau of the Census, *Evaluation and Research Program*, Series ER-60, No. 5, "Accuracy of Data on Population Characteristics as Measured by CPS-Census Match," 1965, Table 8. We are indebted to Irving Leveson for suggesting that these factors could be used to adjust New York City population counts.

When these factors are applied to the data for New York City, they yield a total population of 7,964,000 for 1960, an increase of 2.33 percent over the published figure. The second row of Table A-1 was computed by applying this factor (1.0233) to the estimates of total population shown in the first row.³

THE METROPOLITAN ESTIMATES PROGRAM

For each year after 1960, the Bureau of the Census has prepared estimates of the populations of selected metropolitan areas and their constituent counties. The five counties composing New York City are included in this program, and the Bureau's estimates of their combined population are shown in the first row of Table A-1. While the procedures varied from year to year, most of these figures were obtained by averaging the results of three separate methods for estimating population changes subsequent to the 1960 enumeration:

1. "Component Method II," which employs vital statistics to measure natural increase and uses changes in school enrollment as a basis for estimating net migration;
2. A composite method in which separate estimates are prepared for broad age/sex groups in the population using different types of current data for each group; and
3. A housing unit method, in which estimated changes in the number of occupied housing units are used as the basis for estimating changes in population.⁴

The estimates given in Table A-1 for 1961 to 1964 show an increase of 239,000 persons, apparently due to the influence of the housing unit method which assumes that an increase in the housing inventory reflects a nearly corresponding increase in the number of households. As evidenced by rising vacancy rates, the apartment-building boom of those years was not matched by net household formation, and the Housing and Vacancy Survey of 1965 found fewer people than did the 1960 census.

The results of this sample survey did not persuade the Bureau to revise its earlier estimates, but it did moderate subsequent ones. For each year after 1964, findings of either the 1965 or 1968 Housing and Vacancy Survey were averaged in with estimates derived by their standard methods.⁵ Inclusion of these survey data in the estimating procedure, together with a sharp drop in new occupancy permits after 1965, caused the series to level off. It shows an increase of only 33,000 persons between 1964 and 1967 and a decrease of 58,000 persons between 1967 and 1968.

³ Fig. 1 in Ch. II also shows an adjusted estimate for 1950. This was computed by applying the 1960 race-specific factors shown above to the enumerated populations for that year. Because nonwhites were a smaller fraction of the total population, the overall adjustment for that year is smaller than for 1960.

⁴ Details are given in U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 427, "Estimates of the Population of Counties and Metropolitan Areas, July 1, 1966: A Summary Report," 1969.

⁵ *Current Population Reports*, Series P-25, No. 371, p. 7; No. 427, p. 8; No. 432, p.3.

THE NEW YORK CITY HOUSING AND VACANCY SURVEYS

The Housing and Vacancy Surveys (HVS) of 1965 and 1968 were conducted by the Bureau of the Census under contract to the Office of Rent Control, HDA. Their principal purpose was to determine whether vacancy rates in any part of the housing stock had reached a level that would justify decontrol of rent-controlled housing, but the survey schedules included most of the items covered by the 1960 Census of Housing and a few key population characteristics as well. The sampling frame included only living quarters that qualified as housing units under 1960 census definitions, thus excluding inmates of institutions and residents of hotels, rooming houses, and dormitories.⁶

Both in 1965 and 1968, the Bureau of the Census constructed stratified cluster samples for field interviewing. Based on their 1960 vacancy rates, census enumeration districts were assigned to "high vacancy" and "regular" strata within which clusters of either six or nine adjacent units were randomly chosen for interview. A third stratum, similarly sampled, consisted of listings of occupancy permits for buildings completed after the 1960 Census. Altogether, about 36,000 interviews were completed in each year. Weighting each observation by the reciprocal of its probability of selection, the Bureau of the Census estimated the size and characteristics of the universe of households and housing units without reference to external control totals other than the numbers of housing units in the listings comprising each stratum.⁷

In 1965, the HVS estimate of the City's household population was 7,549,000 persons. Even after a generous allowance for persons not in households, this figure is well below the Bureau of the Census's indirect estimate for 1964; indeed, it is below the estimate for 1960 based on the decennial census enumeration. Between 1965 and 1968, the HVS indicates a modest growth of 42,000 persons, in contrast to a decline of equal magnitude in the Bureau's indirect estimates.

THE NEW YORK CITY POPULATION HEALTH SURVEY

The Population Health Survey (PHS) was initiated in 1963 by the City's Department of Health to provide current data for planning health services. In 1966, its administration was transferred to the Center for Social Research, City University

⁶ Findings of these surveys as they relate to rental housing are published in Chester Rapkin, *The Private Rental Housing Market in New York City, 1965*, City Rent and Rehabilitation Administration, December 1966; and Paul L. Niebanck, *Rent Control and the Rental Housing Market in New York City, 1968*, Department of Rent and Housing Maintenance, January 1970. To avoid confusion about the exclusion of rooming-house tenants, we should note that living quarters classified by the Department of Buildings as Single-Room Occupancy (SRO) units, illegal for family occupancy because they lack complete kitchen or plumbing facilities, may nonetheless meet the Bureau of the Census's definition of a housing unit. When this was the case, the HVS counted their occupants as members of households.

⁷ See U.S. Bureau of the Census, "New York City Housing and Vacancy Survey, Sample Design and Estimation Procedure," public releases dated August 20, 1965 and December 23, 1968. The first is reproduced in Rapkin, *op.cit.*, pp. 128-134; the second in Niebanck, *op.cit.*, pp. 239-245.

of New York. Data from annual field surveys have been used to estimate the population of New York City for 1964, 1965, and 1966. Additional detail on unrelated individuals and families has been published for 1964.⁸

The PHS uses a stratified cluster sample to cover the noninstitutional population of the City, including persons living in group quarters (rooming houses, hotels, dormitories). The stratification is geographic, dividing the City into 30 Health Districts. Within each district, the PHS systematically samples a listing of census blocks whose order on the list is random. In each of about 700 selected blocks, a cluster sample of 8 adjacent addresses is chosen by means of a translation of the random number used in block-selection. A supplementary sample frame of blocks containing buildings constructed after 1960 was compiled and regularly updated from listings of occupancy permits; this frame is also sampled. Altogether, the sample yields about 5,500 completed interviews each year. In order to operate with a small team of interviewers, field work is spread evenly over the calendar year, with half the households in each cluster interviewed during the first 6 months and half interviewed during the second 6 months. To estimate universe characteristics from the sample, observations for each census block sampled are weighted according to the 1960 count of housing units on that block, with added weights given to blocks containing group quarters.⁹

The PHS estimates of total noninstitutional population for 1964, 1965, and 1966 are shown in Table A-1. For 1965, the figure is quite close to the Housing and Vacancy Survey's estimate of the household population, and shows little change during the 3-year interval. However, comparison of the detailed 1964 tables with other sources leads us to believe that unrelated individuals were undercounted by PHS. One possible explanation is that the sample frame did not deal adequately with group quarters such as hotels, rooming houses, and dormitories. In any event, we added about 90,000 unrelated individuals to the PHS estimate before making the extrapolations described below.

ESTIMATES PREPARED BY THE NEW YORK CITY-RAND INSTITUTE

The conflicting evidence of the three series discussed above led us to prepare our own estimates for 1965 and 1970. After comparing the three methods, we concluded that the field surveys were more reliable than indirect estimates using 1960 benchmarks, and that the household and family detail of the HVS and PHS fit plausibly with data from the preceding decennial censuses. We consequently con-

⁸ Leonard S. Kogan and M. J. Wantman, *Estimates of Population Characteristics, New York City, 1964-1965-1966*, Population Health Survey Research Bulletin RB-P4-68, Center for Social Research, City University of New York, June 1968; Anne Cugliani and Irving Sivin, *Population Characteristics, 1964*, Report No. P-1, Office of Program Planning, Research and Evaluation, City Department of Health.

⁹ Irving Sivin and Paul M. Densen, "The Sample Design of New York City Population Health Survey," *Proceedings of the American Statistical Association, Social Statistics Section*, 1965, pp. 202-208. During the first year of survey operation, interviews were obtained with 88 percent of the eligible households. When a household included in the sample could not be interviewed, it was assigned the characteristics of another household in the same cluster.

structed Table A-3 for unrelated individuals and families, using data from the 1950 and 1960 Censuses of Population and the 1964 Population Health Survey; and Table A-4 for households, using data from the 1950 and 1960 Censuses of Housing and the 1965 and 1968 Housing and Vacancy Surveys.

We adjusted each of the post-1960 surveys for exclusions, and extrapolated trends in numbers of families and numbers of households of each size to 1970. From the household series, we derived the total population estimates in Table A-1 that are labeled NYCRI-I; from the family series, we derived the estimates labeled NYCRI-II. The results indicate a slight decrease in population during the first half of the decade and a slight increase in the second.

OTHER POPULATION ESTIMATES AND PROJECTIONS

Six other agencies have published estimates or projections of the City's population after 1960 that appear to have enough foundation in analysis to warrant their inclusion in Table A-1. None, however, is based on direct field surveys. Instead, each uses a variant of one of the three indirect methods underlying the Bureau of the Census's Metropolitan Estimates, with results that are closer to that series than to the HVS or PHS findings. Our sources are cited in the table, and the reader is directed to these for methodological details, not readily available in every case.

THE 1970 CENSUS OF POPULATION

By the time this volume is published, it is probable that the Bureau of the Census will have released preliminary tabulations of the results of the 1970 Census of Population. According to press reports, the Bureau is finding that many of the nation's central cities lost population during the decade, while their suburbs gained. We await the release of New York City data with interest, anticipating that it will show a population of 7.8 to 8.0 million persons, at best a slight increase over the 1960 figure.

Whatever the findings of the 1970 Census, they are certain to be disputed. In previous decennial censuses, the Bureau gathered its data by house-to-house canvassing. In 1970, it distributed enumeration forms through the Post Office, to be completed by the householder and mailed back to census field offices. There, the forms were edited and additional information, when needed, was requested by telephone. Home visits in urban areas were made only as a last resort.

How these new procedures will affect the completeness and accuracy of enumeration remains to be seen. While the Bureau will conduct postenumeration accuracy surveys, their results are not likely to be known until 1972 or later.

* * *

In the preceding pages, we have discussed the contents of Tables A-1, A-3, and A-4. The remaining tables in this appendix provide additional detail and documentation for figures and tables presented in Ch. II.

Table A-1

ESTIMATES AND PROJECTIONS OF TOTAL POPULATION: NEW YORK CITY, 1960-1970

Source of Estimate or Projection	Reference Date	Thousands of Persons										
		1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
U.S. Bureau of the Census:												
Metropolitan Estimates Program ^a	1 Jul ^a	7,782	7,750	7,825	7,932	7,989	8,011	8,019	8,022	7,964		
Adjusted for undercount ^b	1 Jul	7,964	7,931	8,008	8,118	8,174	8,198	8,206	8,209	8,150		
Housing and Vacancy Survey ^c	1 Apr						7,549			7,591		
Adjusted for exclusions ^d	1 Apr						7,694			7,745		
Consolidated Edison	1 Jan		7,781	7,781	7,800	7,840	7,930	8,040	8,125	8,110		
Population Health Survey ^e	1 Jul					7,558	7,552	7,532				
Adjusted for exclusions ^f	1 Jul					7,634	7,628	7,608				
DCP-CONSAD (revised)	1 Apr						7,874					7,900
Tri-State Transportation Study	—						7,880					
Federal Housing Administration	1 Sept					7,780			8,030			8,087
Regional Plan Association	1 Jul						7,992					8,162
NYS Office of Planning Coordination	—						7,996					7,812
NYCRI I	1 Apr						7,694					7,921
NYCRI II	1 Apr						7,746					7,921

SOURCES: U.S. Census of Population, 1960 and Current Population Reports, Series P-25, Nos. 330, 378, 411, 427, and 432; and unpublished tabulations, New York City Housing and Vacancy Surveys of 1965 and 1968; Consolidated Edison, *Population of New York City and Westchester County*, various dates; Population Health Survey, Research Bulletin RB-P4-68, *Estimates of Population Characteristics, New York City, 1964-1965-1966*, June 1968; DCP-CONSAD, unpublished tabulations from the Department of City Planning, based on a report prepared by the CON-SAD Corporation; Tri-State Transportation Commission, "Regional Forecast, 1985," 1967; Federal Housing Administration, "Analysis of the New York Housing Market Area," November 1968; New York State Office of Planning Coordination, "Demographic Projections for New York State Counties to 2020 A.D.," 1968; NYCRI-I, Appendix Table A-4; NYCRI-II, Appendix Table A-3.

^a Entry for 1960 is the complete count of the decennial census for 1 April; subsequent entries are estimates for 1 July.

^b Adjusted by NYCRI to reflect national urban rates of underenumeration by race. See text.

^c Population in households only; excludes persons living in institutions and group quarters.

^d Adjusted by NYCRI to include estimate of population not in households. See Appendix Table A-3.

^e Civilian noninstitutional population only.

^f Adjusted by NYCRI to include estimated military and institutional population. See Appendix Table A-4.

Table A-2

LIVING ARRANGEMENTS OF FAMILIES AND UNRELATED INDIVIDUALS:
NEW YORK CITY, 1960

Living Arrangement	Thousands of Cases	Percentage Distribution
Household headed by:		
Married couple	1,699.0	64.0
Person related to other members	353.5	13.3
Unrelated individual	602.0	22.7
<i>Living alone</i>	<i>515.1</i>	<i>19.4</i>
<i>Living with others</i>	<i>86.9</i>	<i>3.3</i>
Total	2,654.4	100.0
Family households containing:		
Only primary family	> 1,911.8	> 93.1
Sub-family ^a	< 71.0	< 3.5
Lodgers or employees	< 126.0	< 6.1
Total	2,052.4	100.0
Unrelated individuals living:		
Alone in a household	515.1	58.7
With others in a household	212.9	24.2
<i>With other unrelated individuals</i>	<i>< 173.8</i>	<i>< 19.8</i>
<i>With a family</i>	<i>< 126.0</i>	<i>< 14.3</i>
In group quarters ^b	86.1	9.8
In an institution ^c	64.1	7.3
Total	878.2	100.0

SOURCE: *U.S. Census of Population, 1960*, Vol. I, Part 34, Tables 21 and 28 (complete count); sub-families from Table 108 (25 percent sample). See also "List of Corrections," p. XLVII.

NOTE: Exact distribution of family households and of unrelated individuals living with others in households cannot be determined from published data. Limits are derived by residual accounting. Distributions may not add exactly to totals because of rounding.

^a A sub-family is a married couple with or without children, or one parent with one or more children under 18, living in a housing unit and related to the head of the household or his wife.

^b Includes rooming and boarding houses; dormitories for students, hospital employees, and members of religious orders; and military barracks.

^c Inmates of hospitals, nursing homes, prisons, juvenile detention homes, and other places of treatment or custodial care. Although included here as "unrelated individuals," these persons are not so counted by the Bureau of the Census.

Table A-3

NUMBERS OF UNRELATED INDIVIDUALS, FAMILIES BY SIZE, AND PERSONS
IN FAMILIES AND NOT IN FAMILIES: NEW YORK CITY 1950-1970

Item	Thousands of Families or Persons				
	1950	1960	1964	1965	1970
Unrelated individuals	735.3	814.1	757.5	855.0	898.0
Families by size:					
2 persons	729.2	777.7	811.0	820.0	860.0
3 persons	566.8	506.2	511.5	510.0	505.0
4 persons	457.2	422.9	398.5	395.0	390.0
5 persons	214.0	208.2	205.5	204.0	200.0
6 persons	81.8	93.3	149.0	156.0	170.0
7 persons	35.7	71.5			
8+ persons	28.8				
Total	2,113.5	2,079.8	2,075.5	2,085.0	2,125.0
Total persons in families	7,111.9	6,892.3	6,801.0	6,806.0	6,923.0
Total unrelated individuals	735.3	814.1	757.5	855.0	898.0
Total persons in institutions	44.8	64.1	76.0 ^a	85.0 ^a	100.0 ^a
Total	7,892.0	7,782.0 ^b	7,634.5	7,746.0	7,921.0
Average family size	3.36	3.31	3.28	3.26	3.26

SOURCES: 1950, *U.S. Census of Population, 1950*, Vol. I, Table 37 (unrelated individuals and total number of families, 20-percent sample); and Special Report 2A, Table 47 (distribution of families by size, 2.4-percent sample). Estimates of total families (2+ persons) in these sources differ by 17,600. Special Report 2C, Table 44 (persons in institutions, complete count).

1960, *U.S. Census of Population, 1960*, Vol. I, Table 139 (unrelated individuals, 25-percent sample), Table 28 (persons in institutions, complete count), and special tabulations published by Community Council of Greater New York, *Families in New York City*, Table 4.

1964, Population Health Survey, Report P-1, *Population Characteristics, 1964*, April 1966. Evidence from other surveys suggests substantial underestimate of numbers of unrelated individuals.

1965 and 1970, estimated by NYCRI.

NOTE: Distributions may not add exactly to totals because of rounding.

^a Persons in institutions and on military reservations have not been surveyed since 1960. These estimates were made by NYCRI.

^b Estimates of "total persons in families" and "unrelated individuals" (based on 25-percent sample) do not add exactly to estimate of "total population" less "total persons in institutions" (based on complete count). The discrepancy amounts to 11,500 persons.

Table A-4

NUMBERS OF HOUSEHOLDS BY SIZE AND PERSONS IN HOUSEHOLDS AND
NOT IN HOUSEHOLDS: NEW YORK CITY, 1950-1970

Item	1950	1960	1965	1968	1970
	Thousands of Households				
Size of household:					
1 person	291.1 ^a	515.1	622.3	675.3	700.0
2 persons	687.1 ^a	795.1	836.8	844.0	850.0
3 persons	578.5 ^a	522.4	473.0	469.9	460.0
4 persons	453.6	430.6	415.5	393.1	400.0
5 persons	234.5	216.3	206.0	212.6	215.0
6 persons	99.1	98.5	87.8	96.4	101.0
7 persons	51.9	40.1	43.3	37.9	41.0
8 or more persons	37.0	36.8	35.3	38.1	38.0
Total	2,432.8	2,654.9	2,719.9	2,767.4	2,805.0
	Thousands of Persons				
Total persons in households	7,667.0	7,631.7	7,548.9	7,591.1	7,652.0
Total persons in institutions	44.8	64.1	85.0 ^b	94.0 ^b	100.0 ^b
Total persons in group quarters	180.2	86.1	60.0 ^b	60.0 ^b	60.0 ^b
Total	7,892.0	7,782.0	7,693.9	7,745.1	7,812.0
Average household size	3.15	2.87	2.78	2.74	2.73

SOURCES: 1950, *U.S. Census of Housing, 1950*, Vol. I, Table 19; 1960, *U.S. Census of Housing, 1960*, Vol. I, Table 15; 1965 and 1968, unpublished tabulations, New York City Housing and Vacancy Surveys; 1970, estimated by NYCRI.

NOTE: Distributions may not add exactly to totals because of rounding.

^a The census definition of "household" was changed slightly between 1950 and 1960. These figures were modified to be comparable with 1960 census counts, adding 75,000 households as follows: one-person, 41,000; two-person, 30,000; three-person, 4,000.

^b Persons in institutions and group quarters have not been surveyed since 1960. These estimates were made by NYCRI.

Table A-5
NUMBERS OF HOUSEHOLDS BY SIZE, BY ETHNIC GROUP
OF HOUSEHOLD HEAD: NEW YORK CITY, 1968

Persons per Household	White ^a	Nonwhite ^a	Puerto Rican	Total
	Thousands of Households			
1	532.1	116.2	27.0	675.3
2	683.8	118.0	42.2	844.0
3	342.6	83.5	43.8	469.9
4	279.7	66.2	47.1	393.1
5	138.7	40.8	33.1	212.6
6+	93.3	47.2	31.9	172.4
Total	2,069.3	472.1	226.0	2,767.3
	Percentage Distribution by Ethnic Group			
1	78.8	17.2	4.0	100.0
2	81.0	14.0	5.0	100.0
3	72.9	17.8	9.3	100.0
4	71.2	16.8	12.0	100.0
5	65.3	19.2	15.6	100.0
6+	54.1	27.4	18.5	100.0
Total	74.8	17.1	8.2	100.0
	Percentage Distribution by Household Size			
1	25.7	24.6	11.9	24.4
2	33.0	25.0	18.7	30.5
3	16.6	17.7	19.4	17.0
4	13.5	14.0	20.8	14.2
5	6.7	8.6	14.6	7.7
6+	4.5	10.0	14.1	6.2
Total	100.0	100.0	100.0	100.0

SOURCE: Unpublished tabulations, New York City Housing and Vacancy Survey of 1968.

NOTE: Ethnic group was not reported for 42,877 household heads. These were apportioned among the three ethnic groups shown. Distributions may not add exactly to totals because of rounding.

^a Excludes Puerto Ricans.

Table A-6

NUMBERS OF ROOMS AND PERSONS IN OCCUPIED HOUSING
UNITS: NEW YORK CITY, 1950, 1960, AND 1968

Rooms and Persons in Occupied Housing Units	1950	1960	1968
Thousands of rooms:			
Owner-occupied	2,582	3,318	3,844
Renter-occupied	7,123 ^a	7,461	7,666
Total	9,705 ^a	10,779	11,511
Thousands of persons:			
Owner-occupied	1,675	1,988 ^b	2,220
Renter-occupied	5,879 ^a	5,690 ^b	5,371
Total	7,554 ^a	7,678 ^b	7,591
Rooms per person:			
Owner-occupied	1.54	1.67	1.73
Renter-occupied	1.21	1.31	1.43
Total	1.28	1.40	1.52

SOURCES: Frank S. Kristof, *People, Housing, and Rent Control in New York City*, City Rent and Rehabilitation Administration, June 1964, Table 27; and unpublished tabulations of the New York City Housing and Vacancy Survey of 1968.

NOTE: See Kristof, op. cit., p. 13, for treatment of open-ended classes in census tabulations for 1950 and 1960. We applied his 1960 rules to similar situations in 1968 tabulations. Distributions may not add exactly to totals because of rounding.

^a These figures exclude about 75,000 rooms and 75,000-100,000 persons in rental quarters counted as housing units in 1960 but not in 1950.

^b These figures, taken from published tabulations of the 1960 Census of Housing, differ slightly from those published by the 1960 Census of Population (7,632,000 persons in housing units). The discrepancy is apparently the result of a difference in tabulation procedures.

Appendix B

SUPPLEMENTARY DATA ON INCOMES AND LEVELS OF LIVING

INCOMES OF FAMILIES AND HOUSEHOLDS

Our sources on family and household incomes for 1950 and 1960 are the records of the decennial Censuses of Population and Housing. From the same field records, the Census of Population reports incomes for unrelated individuals and families while the Census of Housing reports incomes for households. Although all households were interviewed, questions about income were addressed only to every fifth household. In 1960, the interviewer requested separate information on income received in the preceding calendar year by each person 14 years and older, from each of three sources of income: (a) wages, salaries, commissions, or tips; (b) profits or fees from working in his own business, professional practice, partnership, or farm; (c) Social Security, pensions, veteran's payments, rent (minus expenses), interest or dividends, unemployment insurance, welfare payments, or other sources. The questions asked in 1950 were quite similar in detail.

Because the decennial census is legally empowered to require answers, the nonresponse rates even to questions about income are quite low: about 6 percent in 1950 and 8 percent in 1960. In 1950, nonrespondents were reported as such. In 1960, each nonrespondent to the income question was assigned the income of the last preceding respondent who matched the nonrespondent on sex, age, color, occupation, and weeks worked.

Thus, income data from the decennial census are based on a very large sample with little danger of nonresponse bias. The questionnaire is reasonably thorough, but field workers are inexperienced temporary employees whose persistence and judgment are open to question. There is no doubt that income reporting is incomplete, resulting in substantial understatement; however, there is no reason to suppose that the degree of understatement in 1960 was different from that in 1950.

Systematic data on the incomes of residents of New York City after 1960 are available from three sources:

1. The Population Health Survey (PHS), conducted annually since 1964 by the Center for Social Research, City University of New York. This is a sample of 5,500 households, with interviews spread throughout the year, and incomes are reported for the year preceding the date of interview. The sponsors of the survey have so far published only median incomes, 1964 to 1966, for families, by ethnic group and sex of the family head.¹ Detailed tabulations of the 1964 survey records were made by a user group, The Urban Medical Economics Research Project, a joint venture of Hunter College and the City's Health Services Administration.²
2. The Housing and Vacancy Surveys (HVS) conducted in 1965 and 1968 by the U.S. Bureau of the Census under contract to HDA. About 36,000 interviews were conducted for each survey, and incomes were reported for the preceding calendar year. Income distributions from these surveys for renter households but not for owners have been published.³ Tabulations covering all respondents were prepared by the Bureau of the Census, and are available for inspection at the Office of Rent Control, HDA. Unit records on magnetic tape are available from the Bureau of the Census, and were acquired for analysis by NYCRI.
3. The Current Population Survey (CPS) conducted annually by the U.S. Bureau of the Census, from which special tabulations of records for New York City can be obtained. Only since 1967 has the CPS taken a large enough sample of New York City residents (2,900 interviews) to permit useful tabulation of income distributions. For 1969, such tabulations for unrelated individuals and families (reporting incomes for the preceding calendar year) were purchased from the Bureau by the Center for New York City Affairs, New School for Social Research, jointly with Urban Coalition Jobs, and the data have been described in two recent articles by Blanche Bernstein.⁴ Through her courtesy, we have examined these data.

With respect to persons covered, the most nearly comparable income data from the 1960 Census and later surveys are those for all families or households of two or more persons. Median incomes for this group computed from each survey are shown in the table below in both current and constant (1968) dollars.

Taken at face value, this eclectic series indicates that there was little change in the typical current-dollar income of New York residents during the first half of the decade and a sharp increase in the second half (about 32 percent between the 1965 PHS and the 1969 CPS). When converted to dollars of constant purchasing

¹ Leonard S. Kogan and M. J. Wantman, *Estimates of Population Characteristics, New York City, 1964-1965-1966*, Population Health Survey Research Bulletin RB-P4-68, June 1968.

² Irving Leveson and Morton Silver, "Income Size Distributions in New York City," unpublished paper prepared for the Urban Medical Economics Research Project, July 1967.

³ Chester Rapkin, *The Private Rental Housing Market in New York City, 1965*, City Rent and Rehabilitation Administration, December 1966; Paul L. Niebanck, *Rent Control and the Rental Housing Market in New York City, 1968*, Department of Rent and Housing Maintenance, January 1970.

⁴ "Welfare in New York City," *City Almanac*, Vol. 4, No. 5, February 1970; and "The Distribution of Income in New York," *The Public Interest*, No. 20, Summer 1970.

	<i>Current Dollars</i>	<i>Constant Dollars</i>
1960 Census of Population	6,100	7,440
1964 Population Health Survey.....	6,130	7,000
1965 Population Health Survey.....	6,241	7,015
1965 Housing and Vacancy Survey.....	6,577	7,390
1966 Population Health Survey.....	6,684	7,390
1968 Housing and Vacancy Survey.....	7,420	7,730
1969 Current Population Survey.....	8,230	8,230

power, the series shows a 6-percent drop in median real income between 1960 and 1964-65; the lost ground was nearly recovered in the following year, and real income rose 11 percent between 1966 and 1969.

However, the comparability of the three post-1960 sources with each other and with the 1960 Census of Population is open to question for various reasons: differences in sampling reliability, accuracy of income reporting, and nonresponse bias.

Sampling Reliability

All three sampling frames were designed by professional statisticians. The PHS systematically sampled a listing of census blocks whose order on the list was random within geographical strata; in each of about 700 selected blocks, a cluster sample of eight adjacent addresses was randomly chosen for interview, for a total of about 5,500 completed interviews.⁵ The HVS divided 1960 Census enumeration districts into "high-vacancy" and "regular" strata, randomly choosing clusters of six or nine adjacent units in each stratum, for a total of about 36,000 completed interviews.⁶ The CPS procedure at the local level was similar to that of the PHS, except that its 500-odd clusters in New York City are composed of 18 adjacent addresses, every third one of which is listed for interview in a particular monthly survey; the selection within clusters rotates over time, yielding about 2,900 completed interviews.⁷ All three surveys include special strata of newly built housing, sampled from listings of occupancy permits. None of them are manifestly biased, although collateral evidence leads us to believe the PHS either undersampled the lodgings of unrelated individuals or failed to distinguish such individuals from families with whom they lived.

⁵ Irving Sivin and Paul M. Densen, "The Sample Design of the New York City Population Health Survey," *Proceedings of the Social Statistics Section*, Annual Meeting of the American Statistical Association, 1965, pp. 202-208.

⁶ U.S. Bureau of the Census, "New York City Housing and Vacancy Survey, Sample Design and Estimation Procedure," public releases dated August 20, 1965 and December 23, 1968, reproduced in the Rapkin and Niebanck reports, cited above.

⁷ *Current Population Reports*, Series P-23, No. 22, "Concepts and Methods Used in Manpower Statistics from the Current Population Survey," June 1967, pp. 7-10.

Accuracy of Income Reporting

The PHS interview schedule used a single question to elicit total family income, giving the respondent a card showing ten income brackets and asking him to indicate the bracket containing his total family income, including the wages, self-employment earnings, Social Security and welfare benefits, etc., of all members. The HVS interview schedule requests the respondent to provide separate dollar estimates of income received from (1) salary, wages, etc., (2) own business or profession, and (3) other sources. Separate entries are made for the head of the household, for his wife, and for other family members taken as a group, for a total of nine entries. These are then added by the interviewer to obtain total family income. The CPS schedule is even more elaborate, with separate inquiries addressed to each family member over 14 years of age, inquiring specifically about income received from each of eight sources: (1) money wages or salary; (2) net income from nonfarm self-employment; (3) net income from farm self-employment; (4) Social Security; (5) dividends, interest, income from estates or trusts, and net rental incomes; (6) public assistance or welfare benefits; (7) unemployment compensation, government employee pensions, and veterans' benefits; (8) private pensions, annuities, alimony, regular contributions from persons not living in the household, royalties, and other periodic income.

Clearly the more detailed approaches would stimulate recollections of income from secondary sources that would otherwise be overlooked. Furthermore, the CPS data were collected just before and the HVS data were collected just after the April 15 deadline for filing income tax returns, at which time respondents might be expected to be better informed as to their income for the preceding calendar year. The PHS interviews were evenly spaced over the year, and respondents were asked their incomes for the year preceding the interview (a period for which they were unlikely to have compiled accounts) rather than for the preceding calendar year.

Nonresponse Bias

Some people choose not to respond completely or at all to questions about income. If the incomes of nonrespondents are atypically distributed, income estimates based only on those responding will be biased. Nonresponse rates tend to increase with the complexity of questioning and to decrease with the skill and persistence of the interviewer.

The PHS made by far the simplest income inquiry, but employed relatively untrained interviewers. The HVS was intermediate in both respects. The CPS, using the best-trained interviewers, asked very detailed questions of a panel of respondents most of whom had been visited before by the same interviewer.

During its first year of operation, 12 percent of the households in the PHS sample (17 percent in Manhattan) were not interviewed either because contact could not be made or because they refused to cooperate. In these cases, PHS substituted a completed interview from the same cluster of eight adjacent households. Among

the households interviewed, another 8 percent failed to respond to the question about family income.⁸

The HVS was more successful in obtaining interviews; its failure rate was 2 percent in 1965 and 2.3 percent in 1968. Weights on all households interviewed were increased to compensate for these failures, a reasonable procedure given the low noninterview rate. Among households interviewed, however, many are reported as not having responded to questions about income: 35 percent in 1965 and 42 percent in 1968. Part of the problem was that the income questions came at the very end of a four-page questionnaire, when both field workers and respondents were likely to be tired of the interview. More is explained by the treatment of formally incomplete answers; the Census Bureau's editors apparently recorded all cases as "no response" if entries were missing from any of the ten blanks provided.⁹

We do not know the nonresponse rates for the New York City segment of the CPS. Nationally, the CPS reported a 5-percent no-interview rate. In addition, field workers failed to obtain complete answers to the elaborate set of income questions from about 19 percent of all families in the sample. Most of these gave some information; on earned incomes, nonresponse was under 5 percent.¹⁰

In both the PHS and HVS, those interviewed but failing to respond to questions about income are simply reported as nonrespondents. The CPS has developed an elaborate procedure for imputing incomes to nonrespondents. They search the preceding survey records for a respondent who matches the nonrespondent on age, race, sex, family position, occupation, and weeks worked, and impute the missing income items from those reported by the matched respondent. (In this small national sample, the matched person for a New York City nonrespondent must frequently have been a nonresident of the City.) According to the Bureau of the Census, this procedure tends to yield slightly higher estimates of the proportions of families and individuals in the upper income classes than estimates based solely on persons reporting their incomes.

All surveys with which we are familiar show sharp differences in the income distributions for households of one, two, and three persons, with lesser differences among larger household sizes. For any given size of household, there tend to be sharp differences in the incomes of owners and renters. Since household size and tenure were recorded for virtually all those interviewed in the Housing and Vacancy Surveys of 1965 and 1968, we used this information as an aid to allocating nonrespondents to the income questions posed by these surveys. Within each of eight household size and six tenure categories, we assumed nonrespondents to have the same income distribution as respondents. (We could not use the Bureau of the Census's methods of assigning incomes to individual nonrespondents because the HVS unit records did not report the incomes of individual household members, their occupations, or weeks

⁸ Sivin and Densen, *op. cit.*, p. 207.

⁹ The unit records released by the Bureau of the Census contain but a single income field, "total family income." Components by source or by recipient were not shown.

¹⁰ *Current Population Reports, Series P-60, No. 66, "Income in 1968 of Families and Persons in the United States,"* December 1969, pp. 15-16, and discussions with Daniel B. Levine, Demographic Surveys Division, U.S. Bureau of the Census.

worked.) We believe that our procedure greatly reduced, if it did not eliminate, the likelihood of nonresponse bias in the HVS income distributions, but we cannot show this to be the case.

In our judgment, the simplicity of the PHS income question resulted in underreporting of income relative to the 1960 Census of Population, probably on the order of 5 to 10 percent in the modal range of incomes. For those reporting incomes to the HVS, we think the figures should be quite directly comparable with those of the 1960 Census of Housing, where the income data are tabulated by household rather than family size; there remains, however, the possibility of uncorrected nonresponse bias in our estimates from this source. We think the very detailed questionnaire of the 1969 CPS, the use of skilled interviewers, and the rapport established by repeated interviews with a permanent panel of households would result in more complete reporting of income than any of the other surveys. We would choose those data as the best available despite the marginal sample size. However, *relative to the 1960 Census of Population*, we think the 1969 CPS overreports income by 5 to 10 percent in the modal range, and probably more in the upper tail of the distribution. These judgments will be tested by the reports of the 1970 Census of Population, soon to be issued.

Although NYCRI prepared some preliminary income estimates based on the 1964 PHS, they have been omitted from this volume in favor of data from the HVS of 1965 and 1968 and the CPS of 1969. We use HVS income data because it is, we think, comparable with the 1960 Census of Housing's income data; and because the survey records permit us to relate income to housing characteristics. We present the CPS income data because we think it is closer to income actually received than any other data at our disposal.

Income data from the 1969 CPS are presented here only as percentage distributions, although some qualified use is made in Ch. III of absolute numbers of households. The CPS sample is not self-weighting; it consists of a fixed number of households in each community sampled. Thus, the appropriate expansion factors for sample observations must be derived from independent estimates of the size of the universe. The Bureau of the Census's independent estimate of the national population is used for this purpose in its published CPS reports. When applied to the 1969 sample for New York City, these national expansion factors imply that the City's population consisted of 895,000 unrelated individuals and 1,986,000 families of two or more persons, for a total of about 7.4 million persons.¹¹ This is almost certainly a substantial underestimate; the Bureau of the Census's own "composite" estimate of New York City's population in 1968 was 7,964,000; our own estimates for 1970 are 7.8 to 7.9 million. (See Appendix Table A-1.) The result is odd, because the local CPS underestimate implies that New York City's population has grown faster than the national average since 1960, clearly not the case.

¹¹ The exact figure depends on the average number of persons in families reported by the CPS as consisting of six or more persons. If an average of 6.5 is assumed, the total is 7,337,000; if an average of 7.0 is assumed, the total is 7,419,000. The 1968 Housing and Vacancy Survey detailed household size up to nine persons; the average size of *households* of six or more persons was 6.77. A family cannot be larger than the household of which it is a part.

In any event, the *relative* numbers of unrelated individuals and families of each size and income, as reported in our Tables 4 and B-1, are not affected by uncertainty as to the appropriate expansion factor, nor are computed medians and quartiles.

INCOMES OF WELFARE HOUSEHOLDS IN 1969

Table 8 of Ch. III presents estimates of the incomes in 1969 of households containing welfare clients, by size of household. These data were obtained from tabulations prepared by the City's Bureau of the Budget from machine-readable records of the Department of Social Services (DSS).

The estimates were compiled from two sources: The Preliminary Check Print Tape for the payment cycle of July 2, 1969, and the Master File of case records processed by DSS's Automatic Budget Computation System. The first source defined the universe of welfare cases; the second provided details on case characteristics, living arrangements, consumption budgets, and incomes (including DSS payments).

The Preliminary Check Print Tape contained 354,976 case records, including 7,977 for which no check was written for the July 2 payment cycle. These, together with 550 incomplete records, were removed from the file prior to analysis, leaving a case-count of 346,449, a figure thereafter treated as the universe of active welfare cases.

The Automatic Budget Computation (ABC) System was introduced at selected welfare centers several years ago to process new applications for assistance. Its domain has expanded over time, but in mid-1969, it was not in use at all welfare centers, and it did not cover all cases handled by those centers where it was in use. Overall, 43 percent of the records carried by the Preliminary Check Print Tape were covered by ABC.

Both the Check Print and ABC records were stratified by living arrangement (institutional, noninstitutional), borough of location, and assistance category ("case type") for a total of 84 strata. Within each stratum, individual ABC records were weighted by the ratio of Check Print to ABC records. In this manner, detailed characteristics available only on the ABC records were "expanded" to cover the universe of cases covered by the Check Print Tape.

While the information available for mutual stratification of these two files was well used, there remains some chance of systematic bias in the distributions of case characteristics inasmuch as the cases covered by ABC were not a random sample of those in each stratum. More troublesome, however, is the estimate of the size of the universe. While the Check Print Tape contained 354,976 case records (346,999 receiving payments), the *Monthly Statistical Report* of the Bureau of Fiscal Administration, DSS, shows 379,683 cases receiving assistance in July 1969. At this writing, the Bureau of the Budget has not completely resolved the discrepancy of nearly 33,000 cases.

The apparent explanation is that these are inmates of hospitals, nursing

homes, etc. The Check Print Tape listed about 6,000 such institutionalized cases, a number well below expectations. It appears, however, that in many instances DSS pays room and board directly to the institution, and that these payments are not included in the Check Print Tape. In 1968, an informed official gave us an estimate of 40,000 institutionalized welfare cases, a figure which would nicely reconcile the two sources cited above.

The ABC Master File is organized by households. A household may include more than one case (e.g., a mother receiving aid to dependent children and a grandfather receiving old age assistance); it may also include persons who do not receive public assistance. After expansion of the ABC records as described above, the Bureau of the Budget estimated that there were 314,400 households containing welfare recipients, excluding welfare clients in institutions. This figure is the total of welfare households given in Table 8. Since the institutional population is also excluded by the Housing and Vacancy Survey and the Current Population Survey, comparison of the total welfare population with data from these sources (Tables 9, B-9, and B-10) is in this respect appropriate. However, the household sizes and incomes reported by ABC cover only welfare clients in the household; the Housing and Vacancy Survey counts all household members and counts the income of the head of the household and all related persons; the Current Population Survey counts all related persons and their incomes, but does not group unrelated household members. Thus, the data are not strictly comparable.

* * *

The following fourteen tables provide supporting data for the text, tables, and figures of Ch. III.

Table B-1

PERCENTAGE DISTRIBUTION OF UNRELATED INDIVIDUALS AND FAMILIES, BY
INCOME IN 1968 DOLLARS: NEW YORK CITY, 1950, 1960, AND 1969

Income in 1968 Dollars	Unrelated Individuals ^a			Families		
	1950	1960	1969	1950	1960	1969
Under 1,000	30.5	22.5	10.2	7.8	2.8	1.7
1,000-1,999	17.5	16.0	24.0	3.2	3.7	3.4
2,000-2,999	15.0	12.5	11.5	9.0	4.6	6.0
3,000-3,999	15.0	11.0	11.6	12.0	7.0	6.5
4,000-4,999	9.0	11.0	7.9	14.8	7.3	7.3
5,000-5,999	4.7	8.0	7.3	12.4	9.7	7.8
6,000-6,999	2.6	6.0	6.1	10.3	10.0	7.5
7,000-7,999	1.2	4.3	5.7	7.2	11.0	8.1
8,000-8,999	1.5	1.5	3.0	6.7	8.0	7.0
9,000-9,999	0.5	1.4	3.9	3.6	7.0	5.9
10,000-10,999	2.2	4.0	5.7	2.4	5.3	6.5
11,000-11,999				2.1	4.7	4.2
12,000-12,999				1.8	3.0	5.9
13,000-13,999				1.2	2.6	3.6
14,000-14,999	1.4	2.3	3.1	0.9	2.3	3.4
15,000 or more				4.6	11.0	15.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Median income	\$2,170	\$2,930	\$3,380	\$5,170	\$ 7,440	\$ 8,230
Interquartile range	3,050	4,120	4,870	4,300	5,880	7,550
Upper limit	3,760	5,250	6,400	7,750	10,740	12,550
Lower limit	710	1,130	1,620	3,450	4,940	5,000

SOURCES: *U.S. Census of Population, 1950*, Vol. II, Part 32, Table 37; *U.S. Census of Population, 1960*, Vol. I, Tables 76 and 139; special tabulations by the Bureau of the Census of data from the Current Population Survey of March 1969 (by courtesy of the Center for New York City Affairs and Urban Coalition Jobs); and U.S. Bureau of Labor Statistics, *Consumer Price Index for Urban Wage Earners and Clerical Workers, New York City*.

NOTE: All incomes are reported for the calendar year preceding the survey. Incomes for calendar 1949 and 1959 were adjusted to 1968 dollars by graphic interpolation on cumulative frequency distributions. Medians and quartile values were estimated in the same way; other methods may yield slightly different results. Distributions may not add exactly to totals because of rounding.

^a Excluding persons in institutions.

Table B-2

NUMBERS OF UNRELATED INDIVIDUALS AND FAMILIES BY INCOME IN 1959 DOLLARS,
BY SIZE OF FAMILY: NEW YORK CITY, 1960

Income in 1959 Dollars ^a	Thousands of Families, by Number of Persons per Family						
	1 ^b	2	3	4	5	6+	Total
Under 1,000	220.2	41.6	14.3	8.4	4.2	4.4	293.1
1,000-1,999	137.7	65.3	17.6	9.4	4.8	5.2	240.0
2,000-2,999	120.4	73.7	28.3	18.8	10.1	10.8	262.0
3,000-3,999	108.5	85.5	43.3	33.2	17.4	16.3	304.2
4,000-4,999	80.5	90.1	56.5	46.4	22.2	18.2	313.9
5,000-5,999	55.4	92.1	67.8	63.1	30.1	19.8	328.3
6,000-6,999	28.4	73.9	59.2	54.4	26.5	17.8	260.2
7,000-9,999	35.5	143.2	119.2	100.3	47.8	34.2	480.1
10,000-14,999	15.5	71.9	69.7	61.2	31.1	25.4	274.9
15,000 and over	12.2	40.3	30.3	27.6	13.9	12.8	137.2
Total	814.1	777.7	506.2	422.9	208.2	164.9	2,893.9
Median income	\$2,400	\$5,360	\$6,420	\$6,560	\$6,580	\$6,430	\$5,100
Interquartile range	3,380	4,850	4,690	4,500	4,600	5,350	5,070
Upper limit	4,300	8,050	9,120	9,300	9,350	9,600	7,800
Lower limit	920	3,200	4,430	4,800	4,750	4,250	2,730

SOURCES: Unrelated individuals from *U.S. Census of Population, 1960*, Vol. I, Part 34, Table 139 (25-percent sample); families from The Community Council of Greater New York, *Families in New York City*, May 1968, Table 11, based on a special tabulation of data from the 1960 Census of Population (25-percent sample).

NOTE: Distributions may not add exactly to totals because of rounding. Median and quartile incomes were estimated by graphic interpolation on cumulative frequency distributions within the indicated income intervals.

^a Reported income for calendar 1959.

^b Unrelated individuals, excluding persons in institutions.

Table B-3

NUMBERS OF HOUSEHOLDS BY INCOME IN 1959 DOLLARS, BY SIZE OF HOUSEHOLD:
NEW YORK CITY, 1960

Income in 1959 Dollars ^a	Thousands of Households, by Number of Persons per Household						
	1	2	3	4	5	6+	Total
Under 2,000	211.7	121.2	38.2	21.1	10.6	10.5	413.4
2,000-2,999	73.6	76.7	30.9	20.4	11.0	11.6	224.2
3,000-3,999	68.8	87.3	45.7	34.8	18.3	17.4	272.2
4,000-4,999	53.1	91.4	58.3	47.4	23.1	19.2	292.7
5,000-5,999	39.1	92.4	69.1	63.7	30.9	21.0	316.2
6,000-6,999	20.7	73.2	60.0	54.6	27.2	18.7	254.6
7,000-7,999	12.4	59.1	49.6	41.4	20.4	14.8	197.7
8,000-9,999	14.2	83.1	70.3	58.6	28.3	21.2	275.8
10,000-14,999	12.1	71.5	69.9	60.9	31.5	26.8	272.7
15,000 or more	9.5	39.0	30.4	27.8	15.1	14.1	135.6
Total	515.1	795.1	522.4	430.6	216.3	175.3	2,654.9
Median income	\$2,600	\$5,250	\$6,300	\$6,500	\$6,480	\$6,400	\$5,450
Interquartile range	3,480	4,880	4,700	4,530	4,680	5,460	5,010
Upper limit	4,600	7,920	9,000	9,200	9,330	9,700	8,100
Lower limit	1,120 ^b	3,040	4,300	4,670	4,650	4,240	3,090

SOURCES: *U.S. Census of Housing, 1960*, Vol. II, Part 5, Table B-3 (25-percent sample), and computations by NYCRI.

NOTE: Households of three and four persons are combined in the source table; NYCRI allocated the combined total for each income group in the ratio of three- to four-person families to that income group, elsewhere reported. Distributions may not add exactly to totals because of rounding. Median and quartile incomes were estimated by graphic interpolation on cumulative frequency distributions.

^a Reported income for calendar 1959 of the head of the household and household members related to the head.

^b Because it falls in a wide income interval at the tail of the distribution, this estimate is less reliable than the others shown.

Table B-4

NUMBERS OF HOUSEHOLDS BY INCOME IN 1964 DOLLARS, BY SIZE OF HOUSEHOLD:
NEW YORK CITY, 1965

Income in 1964 Dollars ^a	Thousands of Households, by Number of Persons per Household						
	1	2	3	4	5	6+	Total
Under 1,000	57.1	10.4	2.1	1.2	1.1	0.8	72.8
1,000-1,999	127.5	81.3	18.8	9.0	3.4	3.1	243.1
2,000-2,999	82.5	87.1	26.8	22.1	10.8	7.3	236.5
3,000-3,999	80.2	73.4	39.1	25.7	14.6	19.0	252.0
4,000-4,999	72.7	78.7	43.1	33.4	17.6	17.5	262.9
5,000-5,999	72.3	108.8 ^b	57.2	56.9	26.2	20.0	341.4
6,000-6,999	42.0	75.7	60.0	52.7	24.5	20.2	275.1
7,000-7,999	25.5	67.3	48.4	46.3	25.1	20.1	232.8
8,000-8,999	17.5	55.4	38.0	38.0	20.9	13.8	183.6
9,000-9,999	8.4	37.3	28.7	25.3	14.8	10.6	125.1
10,000-10,999	15.1	54.4	33.4	31.5	15.1	11.7	161.2
11,000-11,999	2.1	23.9	16.3	12.3	7.3	5.4	67.4
12,000-12,999	5.4	19.8	18.4	15.2	5.6	4.9	69.3
13,000-13,999	1.2	9.9	9.8	8.9	2.9	1.6	34.3
14,000-14,999	1.4	6.6	5.7	6.2	2.9	1.5	24.3
15,000 or more	11.2	46.4	27.0	30.7	13.4	8.6	137.1
Total	622.2	836.2	472.7	415.4	206.2	166.1	2,718.9
Median income	\$3,550	\$5,830	\$6,800	\$7,130	\$7,200	\$6,770	\$5,860
Interquartile range	3,860	5,380	4,900	4,560	4,400	4,600	5,100
Upper limit	5,650	8,780	9,600	9,830	9,600	9,200	8,600
Lower limit	1,790	3,400	4,700	5,270	5,200	4,600	3,500

SOURCE: Tabulations by NYCRI of data from the New York City Housing and Vacancy Survey of 1965 (1-percent sample).

NOTE: Thirty-five percent of all households failed to report incomes. These were allocated among income groups on the basis of tenure characteristics and household size; see Table B-7 for details. Distributions may not add exactly to totals because of rounding. Median and quartile incomes were estimated by graphic interpolation on cumulative frequency distributions.

^a Reported income for calendar 1964 of the head of the household and household members related to the head.

^b We are unable to account for the peculiar concentration of two-person households in this income bracket. It does not occur in our data for 1960 (Table B-3) or 1968 (Table B-5).

Table B-5

NUMBERS OF HOUSEHOLDS BY INCOME IN 1967 DOLLARS, BY SIZE OF HOUSEHOLD:
NEW YORK CITY, 1968

Income in 1967 Dollars ^a	Thousands of Households, by Number of Persons per Household						
	1	2	3	4	5	6+	Total
Under 1,000	41.5	12.1	2.7	1.2	0.6	0.5	58.5
1,000-1,999	141.8	62.4	17.7	5.2	3.5	1.7	232.2
2,000-2,999	70.5	88.0	29.0	13.2	7.0	5.7	213.4
3,000-3,999	83.9	76.6	33.4	27.0	15.3	11.1	247.3
4,000-4,999	65.7	69.1	36.9	29.5	18.5	19.6	239.4
5,000-5,999	70.8	73.7	47.1	37.2	19.1	20.4	268.3
6,000-6,999	50.8	70.3	44.2	33.1	19.7	18.4	236.4
7,000-7,999	37.8	64.8	44.4	37.9	23.6	13.4	221.8
8,000-8,999	29.8	57.0	37.2	37.2	20.6	15.4	197.1
9,000-9,999	15.5	41.2	30.7	29.5	14.4	11.7	143.0
10,000-10,999	21.8	58.9	37.9	42.2	18.8	14.3	193.9
11,000-11,999	6.6	23.3	19.6	16.7	9.3	7.6	83.1
12,000-12,999	7.2	27.4	17.4	14.9	8.7	7.7	83.2
13,000-13,999	3.4	17.1	11.8	8.3	5.2	5.6	51.4
14,000-14,999	1.5	11.9	10.5	10.2	3.8	4.0	42.0
15,000 or more	26.5	89.6	49.3	49.7	24.6	15.2	254.9
Total	675.3	844.0	469.9	393.1	212.6	172.4	2,767.4
Median income	\$4,000	\$ 6,600	\$ 7,100	\$ 8,350	\$ 7,950	\$ 7,650	\$ 6,530
Interquartile range	4,750	6,650	5,850	5,500	5,450	5,550	6,350
Upper limit	6,650	10,350	10,250	11,100	10,900	10,750	10,100
Lower limit	1,900	3,700	4,400	5,600	5,450	5,200	3,750

SOURCE: Tabulations by NYCRI of data from the New York City Housing and Vacancy Survey of 1968 (1-percent sample).

NOTE: Forty-one percent of all households failed to report incomes. These were allocated among income groups on the basis of tenure characteristics and household size; see Table B-8 for details. Distributions may not add exactly to totals because of rounding. Median and quartile incomes were estimated by graphic interpolation on cumulative frequency distributions.

^a Reported income for calendar 1967 of the head of the household and household members related to the head.

Table B-6

COMPARISONS OF MEDIAN AND QUARTILE INCOMES IN 1968 DOLLARS AS REPORTED
IN VARIOUS SURVEYS: NEW YORK CITY, 1960-1969

Statistic and Source	Number of Persons per Family or per Household						
	1	2	3	4	5	6 +	Total
<i>Median Income</i>							
1960 Census of Population	\$2,923	\$ 6,528	\$ 7,819	\$ 7,989	\$ 8,014	\$ 7,831	\$ 6,211
1960 Census of Housing	3,166	6,394	7,673	7,916	7,892	7,795	6,638
1965 Housing and Vacancy Survey	3,991	6,553	7,644	8,015	8,093	7,610	6,587
1968 Housing and Vacancy Survey	4,172	6,883	7,405	8,708	8,291	7,978	6,810
1969 Current Population Survey	3,380	7,020	9,050	9,100	10,000	8,860	6,700
<i>Upper Quartile</i>							
1960 Census of Population	5,237	9,804	11,107	11,326	11,387	11,692	9,500
1960 Census of Housing	5,602	9,646	10,961	11,205	11,363	11,814	9,865
1965 Housing and Vacancy Survey	6,351	9,870	10,791	11,050	10,791	10,342	9,667
1968 Housing and Vacancy Survey	6,935	10,794	10,690	11,576	11,368	11,211	10,533
1969 Current Population Survey	6,400	11,150	13,080	14,700	13,480	11,850	10,880
<i>Lower Quartile</i>							
1960 Census of Population	1,120	3,897	5,395	5,846	5,785	5,176	3,325
1960 Census of Housing	1,364 ^a	3,702	5,237	5,688	5,663	5,164	3,763
1965 Housing and Vacancy Survey	2,012	3,822	5,283	5,924	5,845	5,171	3,934
1968 Housing and Vacancy Survey	1,982	3,859	4,589	5,840	5,684	5,423	3,911
1969 Current Population Survey	1,620	4,050	5,940	5,330	5,950	6,040	3,420
<i>Interquartile Range</i>							
1960 Census of Population	4,117	5,907	5,712	5,481	5,602	6,516	6,175
1960 Census of Housing	4,238	5,943	5,724	5,517	5,700	6,650	6,102
1965 Housing and Vacancy Survey	4,339	6,048	5,508	5,126	4,946	5,171	5,733
1968 Housing and Vacancy Survey	4,954	6,935	6,101	5,736	5,684	5,788	6,622
1969 Current Population Survey	4,870	7,100	8,040	9,370	7,530	5,810	7,460

SOURCES: Table 4 and Tables B-2 to B-5.

NOTE: Data from the 1960 Census of Population and the 1969 Current Population Survey are for unrelated individuals and families; all other data are for households. Median and quartile incomes were es-

timated in each case by graphic interpolation on cumulative frequency distributions, then adjusted to 1968 dollars according to interim changes in the Consumer Price Index for New York City.

^a See Table B-3, Note (b).

Table B-7

PERCENTAGE NOT REPORTING INCOME, BY TENURE AND TYPE OF HOUSING, BY
HOUSEHOLD SIZE: NEW YORK CITY HOUSING AND VACANCY SURVEY, 1965

Tenure and Type of Housing	Percentage Not Reporting Income, by Household Size							
	1	2	3	4	5	6	7	8+
Ownership ^a	43.3	31.5	31.4	29.7	24.0	22.9	25.5	21.1
Cooperative ^b	50.7	45.7	30.5	32.7	27.6	42.6	82.0	79.5
Rental:								
Controlled	47.4	38.3	31.6	29.3	26.6	22.3	26.6	23.7
Uncontrolled	51.8	38.0	27.8	27.4	20.4	22.9	18.2	20.0
Public	25.2	23.0	16.7	18.8	19.3	21.9	18.9	14.8
SRO ^c	40.2	32.9	32.3	60.5	83.2	(d)	(d)	(d)

SOURCE: Tabulations by NYCRI of data from the New York City Housing and Vacancy Survey of 1965.

^a Includes owner-occupied apartments in rental structures.

^b Includes condominiums. Some cooperatives and condominiums are probably reported as uncontrolled rentals.

^c Single-Room Occupancy units (lacking private kitchen, bath, or toilet facilities, both with separate entrance to public areas of the building).

^d Too few cases in sample to permit analysis.

Table B-8

PERCENTAGE NOT REPORTING INCOME, BY TENURE AND TYPE OF HOUSING, BY
HOUSEHOLD SIZE: NEW YORK CITY HOUSING AND VACANCY SURVEY, 1968

Tenure and Type of Housing	Percentage Not Reporting Income, by Household Size							
	1	2	3	4	5	6	7	8+
Ownership ^a	47.5	40.4	40.0	35.4	35.5	31.0	31.2	40.9
Cooperative ^b	52.4	49.7	42.7	38.2	30.5	20.9	21.5	(d)
Rental:								
Controlled	50.8	44.8	37.0	34.5	32.4	30.2	22.0	26.9
Uncontrolled	57.9	45.5	36.9	34.7	28.6	28.3	29.5	34.7
Public	29.4	24.0	22.7	24.6	17.1	29.3	15.0	24.9
SRO ^c	52.1	38.6	64.3	42.8	50.2	(d)	(d)	(d)

SOURCE: Tabulations by NYCRI of data from the New York City Housing and Vacancy Survey of 1968.

^a Includes owner-occupied apartments in rental structure.

^b Includes condominiums. Some cooperatives and condominiums are probably reported as uncontrolled rentals.

^c Single-Room Occupancy units (lacking private kitchen, bath, or toilet facilities, but with separate entrances to public areas of the building).

^d Too few cases in sample to permit analysis.

Table B-9

NUMBERS OF HOUSEHOLDS WITH INCOMES BELOW WELFARE STANDARDS, BY WELFARE
STATUS, BY SIZE OF HOUSEHOLD: NEW YORK CITY, 1968/1969

Item	Number of Persons per Household						
	1	2	3	4	5	6 +	Total
Incomes of welfare households in 1969: upper quartile value ^a	\$1,889	\$2,443	\$3,156	\$3,807	\$4,431	\$6,199	\$3,648
Thousands of households in 1968 with less income ^b	167.7	113.2	54.7	41.5	34.4	62.7	474.2 ^c
Thousands of welfare households in 1969 with less income	85.3	38.7	34.6	27.1	18.9	31.2	235.8
Thousands of nonwelfare households with less income ^d	82.4	74.5	20.1	14.4	15.5	31.5	238.4 ^c
<i>As percent of all households with less income</i>	<i>49</i>	<i>66</i>	<i>37</i>	<i>35</i>	<i>45</i>	<i>50</i>	<i>50</i>

SOURCES: Table 8 and Appendix Table B-5.

NOTE: "Household" concepts are not strictly comparable, and data were gathered 14 months apart by different procedures. See text for discussion.

^a Incomes estimated for 1969 from Department of Social Services allowances for the first half of July 1969.

^b Incomes reported for calendar 1967, in 1967 dollars.

Numbers of households estimated from Appendix Table B-5 by linear interpolation within \$1,000 income intervals.

^c Sum of row entries; incomes below \$3,648 were reported for 272,300 households and, by subtraction, for 33,900 nonwelfare households.

^d All households with less income minus welfare households with less income.

Table B-10

NUMBERS OF FAMILIES WITH INCOMES BELOW WELFARE STANDARDS, BY WELFARE STATUS,
BY SIZE OF FAMILY: NEW YORK CITY, 1969

Item	Number of Persons per Family or Household						
	1 ^a	2	3	4	5	6 +	Total
Incomes of welfare households in 1969: upper quartile value ^b	\$1,889	\$2,443	\$3,156	\$3,807	\$4,431	\$6,199	\$3,648
Thousands of families in 1969 with less income ^c	303.6	98.8	43.8	46.7	25.5	47.7	566.1 ^d
Thousands of welfare households in 1969 with less income	85.3	38.7	34.6	27.1	18.9	31.2	235.8
Thousands of nonwelfare families with less income ^d	218.3	60.1	9.2	19.6	6.6	16.5	330.3 ^e
<i>As percent of all families with less income</i>	<i>72</i>	<i>61</i>	<i>21</i>	<i>42</i>	<i>26</i>	<i>35</i>	<i>58</i>

SOURCES: Table 8 and unpublished tabulations by the Bureau of the Census of data from the Current Population Survey of March 1969.

NOTE: Welfare "household" and Census "family" concepts are not strictly comparable. Data were gathered and tabulated by different procedures. See text for discussion.

^a For "family" items, unrelated individuals.

^b Incomes estimated for 1969 from Department of Social Services allowances for the first half of July 1969.

^c Incomes reported for calendar 1968, in 1968 dollars. Numbers of families estimated by linear interpolation within \$1,000 income intervals.

^d All families with less income minus welfare households with less income.

^e Sum of row entries; incomes below \$3,648 were reported for 836,100 families and, by subtraction, for 600,300 nonwelfare families.

Table B-11

DISTRIBUTION OF HOUSEHOLDS BY TENURE AND SIZE OF HOUSEHOLD:
NEW YORK CITY, 1968

Tenure	Number of Persons per Household						
	1	2	3	4	5	6+	Total
Thousands of Households							
Owners	74.4	187.8	130.8	131.0	81.1	65.8	670.9
Renters	600.9	656.2	339.1	262.1	131.5	106.6	2,096.5
Total	675.3	844.0	469.9	393.1	212.6	172.4	2,767.4
Percentage Distribution by Size							
Owners	11.1	28.0	19.5	19.5	12.1	9.8	100.0
Renters	28.7	31.3	16.2	12.5	6.3	5.1	100.0
Total	24.4	30.5	17.0	14.2	7.7	6.2	100.0
Percentage Distribution by Tenure							
Owners	11.0	22.3	27.8	33.3	38.1	38.2	24.2
Renters	89.0	77.7	72.2	66.7	61.9	61.8	75.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: Tabulations by NYCRI of data from the New York City Housing and Vacancy Survey of 1968 (1-percent sample).

NOTE: Distributions may not add exactly to totals because of rounding. "Owners" includes owners of multiple dwellings who occupy one of the units, and owners of apartments in cooperatives and condominiums, although other evidence indicates that some of the latter were reported as renters. "Renters" includes occupants of rental housing units who paid no cash rent; these are usually janitors or building superintendents.

Table B-12

NUMBERS OF HOMEOWNER HOUSEHOLDS BY INCOME IN 1967 DOLLARS,
BY SIZE OF HOUSEHOLD: NEW YORK CITY, 1968

Income in 1967 Dollars ^a	Thousands of Households, by Number of Persons per Household						
	1	2	3	4	5	6+	Total
Under 1,000	7.4	3.8	0.5	0.7	0.2	0.0	12.6
1,000-1,999	18.6	14.0	4.1	0.8	0.8	0.1	38.4
2,000-2,999	10.5	18.9	4.6	1.2	0.5	0.3	36.0
3,000-3,999	7.5	13.7	4.6	1.1	1.7	0.9	29.5
4,000-4,999	4.7	11.5	4.0	3.1	2.3	1.4	27.0
5,000-5,999	6.9	14.2	9.6	6.3	3.8	3.3	44.2
6,000-6,999	4.0	13.0	10.0	10.0	4.7	6.2	47.7
7,000-7,999	3.5	15.9	13.1	11.3	9.4	3.9	57.1
8,000-8,999	2.3	16.2	10.8	14.7	10.3	6.9	61.2
9,000-9,999	1.5	9.9	9.7	11.4	6.2	5.8	44.5
10,000-10,999	1.4	15.9	15.8	19.9	10.7	8.5	72.2
11,000-11,999	0.9	6.5	6.4	9.3	4.5	4.3	31.9
12,000-12,999	1.2	6.4	6.0	6.4	6.3	5.1	31.4
13,000-13,999	0.1	2.6	4.6	4.7	2.8	3.7	18.5
14,000-14,999	0.1	2.0	3.8	5.5	1.8	2.7	15.9
15,000 or more	3.9	23.4	23.4	24.9	15.3	12.5	103.4
Total	74.4	187.8	130.8	131.0	81.1	65.8	670.9
Median income	\$3,080	\$ 7,330	\$ 9,340	\$10,230	\$ 9,720	\$10,350	\$ 8,700
Interquartile range	4,510	6,750	6,280	5,570	5,150	5,600	6,230
Upper limit	6,050	10,500	12,850	13,450	12,900	13,650	11,830
Lower limit	1,540	3,750	6,570	7,880	7,750	8,050	5,600

SOURCE: Tabulations by NYCRI of data from the New York City Housing and Vacancy Survey of 1968 (1-percent sample).

NOTE: Thirty-nine percent of all owner households failed to report incomes. These were allocated among income groups on the basis of tenure characteristics and household size; see text for details. Distributions may not add exactly to totals because of rounding. Median and quartile incomes were estimated by graphic interpolation on cumulative frequency distributions.

^a Reported incomes from calendar 1967 of the head of the household and related persons.

Table B-13

NUMBERS OF RENTER HOUSEHOLDS BY INCOME IN 1967 DOLLARS,
BY SIZE OF HOUSEHOLD: NEW YORK CITY, 1968

Income in 1967 Dollars ^a	Thousands of Households, by Number of Persons per Household						
	1	2	3	4	5	6+	Total
Under 1,000	34.1	8.3	2.2	0.5	0.4	0.5	45.9
1,000-1,999	123.2	48.4	13.6	4.4	2.7	1.6	193.8
2,000-2,999	60.0	69.1	24.4	12.0	6.5	5.4	177.4
3,000-3,999	76.4	62.9	28.8	25.9	13.6	10.2	217.8
4,000-4,999	61.0	57.6	32.9	26.4	16.2	18.2	212.4
5,000-5,999	63.9	59.5	37.5	30.9	15.3	17.1	224.1
6,000-6,999	46.8	57.3	34.2	23.1	15.0	12.2	188.7
7,000-7,999	34.3	48.9	31.3	26.6	14.2	9.5	164.7
8,000-8,999	27.5	40.8	26.4	22.5	10.3	8.5	135.9
9,000-9,999	14.0	31.3	21.0	18.1	8.2	5.9	98.5
10,000-10,999	20.4	43.0	22.1	22.3	8.1	5.8	121.7
11,000-11,999	5.7	16.8	13.2	7.4	4.8	3.3	51.2
12,000-12,999	6.0	21.0	11.4	8.5	2.4	2.6	51.8
13,000-13,999	3.3	14.5	7.2	3.6	2.4	1.9	32.9
14,000-14,999	1.4	9.9	6.7	4.7	2.0	1.3	26.1
15,000 or more	22.6	66.2	25.9	24.8	9.3	2.7	151.5
Total	600.9	656.2	339.1	262.1	131.5	106.6	2,096.5
Median income	\$4,100	\$6,380	\$ 6,950	\$ 7,300	\$6,730	\$6,000	\$5,880
Interquartile range	4,680	6,360	5,570	5,250	4,900	4,050	5,720
Upper limit	6,580	9,960	10,070	10,100	9,500	8,550	9,220
Lower limit	1,900	3,600	4,500	4,850	4,600	4,500	3,500

SOURCE: Tabulations by NYCRI of data from the New York City Housing and Vacancy Survey of 1968 (1-percent sample).

NOTE: Forty-two percent of all renter households failed to report incomes. These were allocated among income groups on the basis of tenure characteristics and household size; see text for details. Distributions may not add exactly to totals because of rounding. Median and quartile incomes were estimated by graphic interpolation on cumulative frequency distributions.

^a Reported income for calendar 1967 of the head of the household and related persons.

Table B-14

PERCENTAGE DISTRIBUTION OF RENTER HOUSEHOLDS BY REFERENCE INCOME
IN 1968 DOLLARS, BY SIZE OF HOUSEHOLD: NEW YORK CITY, 1968

Reference Income in 1968 Dollars ^a	Percentage Distribution of Households, by Number of Persons per Household						
	1	2	3	4	5	6 +	Total
Under 2,000	4.0	2.5	2.5	1.7	3.6	7.0	3.1
2,000-3,999	22.5	12.8	11.0	12.6	19.3	37.5	16.9
4,000-5,999	13.0	13.8	15.5	20.5	26.0	28.5	16.2
6,000-7,999	13.3	13.0	17.5	19.2	21.5	15.8	15.3
8,000-9,999	12.1	12.7	15.8	16.8	13.2	7.4	13.3
10,000-11,999	10.8	10.6	11.7	12.5	6.3	1.1	10.3
12,000-14,999	9.7	12.1	12.5	6.2	3.6	0.7	9.6
15,000 or more	14.5	22.5	13.5	10.5	6.5	2.3	15.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median income	\$ 7,600	\$ 9,250	\$ 8,450	\$ 7,550	\$6,150	\$4,300	\$ 7,800
Interquartile range	8,000	8,950	6,650	5,550	4,500	3,050	7,400
Upper limit	11,850	14,300	12,200	10,600	8,650	6,200	12,000
Lower limit	3,850	5,350	5,550	5,050	4,150	3,150	4,600

SOURCE: Computed from data in Appendix Table B-13.

NOTE: Distributions may not add exactly to totals because of rounding. Median and quartile incomes were estimated by graphic interpolation on cumulative frequency distributions with \$1,000 income intervals.

^a For four-person households, reported incomes for 1967, adjusted to dollars of 1968 purchasing power; for households of other sizes, incomes that permit an equivalent standard of living.

Appendix C

SUPPLEMENTARY DATA ON RENT EXPENDITURES AND THEIR DETERMINANTS

GROSS RENT EXPENDITURES, 1950-1968

Table C-1 shows distributions of renter households by estimated gross rent expenditures for 1950, 1960, and 1968. The data for 1950 and 1960 were taken from tabulations published by the U.S. Bureau of the Census and are based, respectively, on 20 and 25 percent samples of all renter-occupied housing units. Some of the detail shown for 1960 was taken from a later retabulation of a subsample of survey records (.05 percent of all renter-occupied housing units). Data for 1968 were tabulated by NYCRI from unit records of the Housing and Vacancy Survey of 1968, where the sampling rate for renters was about 1.2 percent.

In all three surveys, interviewers recorded monthly contract rent (the amount paid to the landlord) and asked the respondent whether he paid additionally for electricity, gas, water, or fuel (coal, oil, kerosene, or wood); and, if so, how much for each. Only if dollar entries were recorded for all items that the respondent claimed to pay did the Bureau of the Census consider gross rent to be "reported." Tenants paying no contract rent were classified as paying no cash rent even though they may have paid for utilities; such tenants are usually janitors or building superintendents. In 1950, about 4 percent of all respondents either paid no cash rent or failed to report contract rent; another 2 percent failed to report complete gross rent information. These are all excluded from the percentage distribution shown in Table C-1 and Fig. 12. In 1960, about 2 percent paid no cash rent; those who failed to report gross rent were assigned the gross rent of the first preceding household that did report this item, so the tabulations published by the Bureau of the Census do not include a "not reported" category.

In 1968, about 2 percent of the sample reported no cash rent and a very small number (the sample equivalent of 4,100 households) failed to report contract rent. Complete gross rent information was lacking for the sample equivalent of another 168,000 households, of which all but 5,000 reported everything except the amounts of their gas and electricity payments. Virtually all of those who did report gas and electricity payments spent between \$5 and \$15 per month for these purposes; regres-

sion analysis showed that their payments could be reliably estimated by the following formulas:

Controlled units	\$6.56 + \$1.19 per room,
Uncontrolled units	\$6.94 + \$1.24 per room.

We used these parameters to complete the gross rent records of all units for which gas and electricity payments were claimed but amounts were unspecified.

INCOMES OF RENTER HOUSEHOLDS, 1950-1968

Table C-2 shows distributions of renter households in 1950, 1960, and 1968 by income for the preceding calendar year. The sources are the same surveys that provided the gross rent data of Table C-1. For 1950 and 1960, we have used tables published by the Bureau of the Census. For 1968, we tabulated unit records of the Housing and Vacancy Survey of 1968.

The reliability and comparability of income data from these sources are discussed at length in Ch. III and Appendix B. Data for renter households present no new problems. As the reader may recall, the reliability of the 1968 distribution is open to question because a large fraction of those interviewed failed to respond to questions about income. For renter households, the nonresponse rate was 42 percent. Table C-2 shows both the distribution of those who reported their incomes and the distribution of all renter households after allocation of nonrespondents.

Renter households who failed to report their incomes were classified by household size (8 categories) and type of housing occupied (controlled, uncontrolled, public, or SRO). Within each of these 32 categories, nonrespondents were distributed among income classes in the same proportions as respondents in that category. The resulting combined distribution of renter households by income is only slightly different from that of renter households who reported their incomes.

RENT/INCOME RATIOS OF RENTER HOUSEHOLDS, 1950-1968

Table C-3 presents distributions of renter households by rent/income ratio for 1950, 1960, and 1968. In 1950 and 1960, these ratios were computed by the Bureau of the Census, and our sources are the published distributions. For 1968, we computed these ratios from rent and income entries on the unit records of the Housing and Vacancy Survey of 1968.

In each year, ratios were not computed for a number of cases because of missing or ambiguous information about either rents or incomes or both. The bottom half of Table C-3 analyzes these cases, and in Table C-4 they were either assigned to the rent/income bracket in which they were most likely to fall or were allocated

in the pattern of reported cases. The procedures are documented by footnotes to the table.

These ratios fall heir to the defects of both the rent and the income data discussed above, and a large number of cases were allocated in 1950 and 1968. Consequently, small differences among the three distributions have little significance. Using slightly different procedures for allocating "not computed" cases, Frank Kristof estimates median rent/income ratios of .189 and .184 for 1950 and 1960 respectively.¹ Paul Niebanck has published a median value of .210 for 1968, based on tabulations prepared by the Bureau of the Census of the 54 percent of all cases for which full gross rent and income data were reported.²

When such small differences in median and quartile values are at issue, even errors of interpolation within class intervals can become important. In Table C-4, linear interpolations along nonlinear functions result in downward biases of the estimated medians for 1950 and 1960 and an upward bias of the estimated median for 1968. These biases are probably on the order of .002 in each case.

RENT/INCOME RATIOS OF WELFARE AND NONWELFARE HOUSEHOLDS IN 1968

Table C-5 shows the estimated distribution of welfare households by monthly contract rent by annual income (total public assistance grant plus other reported income) as of 1 July 1969. The estimates are based on machine-readable case records covering 43 percent of all welfare cases processed by Automatic Budget Computation (ABC). These records were stratified by living arrangement, borough, and assistance category (aid to dependent children, home relief, etc.) and expanded to cover the universe stratified in the same way. This tabulation excludes cases under institutional care, and data for two or more cases living in the same household have been combined so that each record represents a household that has at least one member who receives public assistance. The incomes of household members not on welfare are excluded, as are their contributions to contract rent.

We have used these data to estimate the distribution of welfare households by rent/income ratio in May 1968, the approximate reference date of the Housing and Vacancy Survey. Several steps were required. First, the rents shown in the stub were annualized and multiplied by 1.06 to make them more nearly comparable with the gross rents recorded by the Housing and Vacancy Survey. Second, rent/income ratios were calculated for each cell of the table, using the midpoint of the rent interval as the numerator and the midpoint of the income interval as the denominator. The resulting distribution of welfare households by rent/income ratio on 1 July 1969 is shown in the first column of Table C-6. Finally, the entries in that column

¹ *People, Housing, and Rent Control in New York City*, City Rent and Rehabilitation Administration, June 1964, Table 42.

² *Rent Control and the Rental Housing Market in New York City 1968*, Department of Rent and Housing Maintenance, January 1970, p. 165 and Table VI-3.

were multiplied by .83, the ratio of welfare caseloads in May 1968 and July 1969,³ to produce an estimate of the distribution of welfare households by rent/income ratio in May 1968, shown in the second column of Table C-6. The estimated number of cases in each rent/income interval was then subtracted from the corresponding distribution for all renter households as estimated from the Housing and Vacancy Survey of 1968. The last column of Table C-6 shows the results of this calculation, the estimated distribution of nonwelfare renter households by rent/income ratio in 1968.

REGRESSION ANALYSIS OF RENT EXPENDITURES IN 1968

The patterns of rent expenditures described in Ch. IV and illustrated in Figs. 15-18 are based on a multiple regression analysis of data from the New York City Housing and Vacancy Survey of 1968. For this survey, the Bureau of the Census, under contract to the Office of Rent Control, gathered data on stratified cluster samples of about 36,000 housing units in New York City. Of these, about 25,000 were occupied rental units.

For our analysis, we selected 11,461 of the 25,000 survey records for occupied rental housing units, rejecting those classified as public housing (operated by the New York City Housing Authority) and those classified as Single-Room Occupancy units (lacking full private bath and kitchen facilities). Only records with complete reporting of contract rent expenditures, household income, and certain specified household characteristics were included; the most common reason for rejecting a record was its failure to report household income. We also excluded records reporting household incomes of less than \$1,000 or more than \$25,000, for reasons discussed below.

Our measure of housing expenditures is gross annual rent payments (monthly payments $\times$ 12). All records included in our sample reported monthly contract rent; a small portion failed to report the respondent's estimate of tenant-paid utilities, and we estimated these missing components of gross rent by means of the formulas presented in the first section of this appendix.

Our independent variables were the following:

1. Gross annual income of the head of the household and related persons.
2. Number of persons in the household.
3. Ethnic group of the household head.
4. Sex of the household head.
5. Age of the household head.

We distinguished only two ethnic categories, "white non-Puerto Rican," and "other," the latter consisting almost entirely of blacks and Puerto Ricans. While

³ According to the *Monthly Statistical Report* of the Bureau of Fiscal Administration, DSS, the caseloads were 314,206 in May 1968 and 379,683 in July 1969. These figures include persons under institutional care, which we excluded from our household count. See Appendix B for reconciliation of the Bureau of the Budget's caseload estimate for July 1969 with that of the Bureau of Fiscal Administration.

there are some a priori grounds for distinguishing blacks from Puerto Ricans, this distinction would have resulted in some very small subsample sizes after the market disaggregations described below.

Our 11,461 observations were divided into four files, each corresponding to a major housing submarket within New York City, as revealed by other analytical work with this survey. The divisions were by location and control status, as follows:

1. Manhattan, controlled.
2. Manhattan, uncontrolled.
3. Non-Manhattan, controlled.
4. Non-Manhattan, uncontrolled.

For each of these files, regression parameters were fitted separately, although the form of the equation was the same in each case.

The regression model, as is usual, was developed by trial and error. It has as its dependent variable the ratio of gross annual rent to gross annual income, and the reciprocal of income reappears on the right-hand side of the equation as an independent variable. These transformations were made to correct for the substantial heteroscedasticity we found in simple regressions of rent on income—i.e., the variance of rent expenditures increases as income increases.

Rent/income ratios become extremely large for incomes close to zero, and extremely small for very high incomes. Because regression coefficients are selected to minimize squared deviations from the regression hyperplane, these extreme values would have influenced our results far out of proportion to their empirical significance. To avoid this bias, we excluded from our data file all records with reported incomes below \$1,000 or above \$25,000.

Household size and age of head are each represented in the regression equation by both linear and quadratic terms, the latter included to capture suspected nonlinear relationships with rent/income ratios. Ethnic background and sex of the head of the household are represented by (0,1) dummy variables, as required by the nature of the data. Our model requires that differences in rent expenditures between ethnic groups or between male and female household heads be estimated as fixed percentages of income; we experimented with a form that estimated them as fixed dollar amounts, but found it less satisfactory.

Table C-7 presents the four fitted regression equations in tabular form. The dependent variables estimated by these equations are, once again, rent/income ratios. Because of the inverse and quadratic forms of various independent variables and the differences in their ranges of magnitude, these coefficients are not at all easy to interpret by inspection. To facilitate interpretation, we present transformations of these equations in Table C-8. Each equation in Table C-7 has been multiplied through by gross annual income, so that the dependent variable in Table C-8 is gross annual rent expenditures. This is the form in which the illustrations presented in Figs. 15-18 were plotted, except that, as a further convenience for the reader, rent is scaled in those figures on a monthly rather than annual basis.

Measures of goodness of fit and reliability of estimation are given at the

bottom of Table C-7. The coefficients of determination measure the proportions of the variance in rent/income ratios that are accounted for by the regression model. Outside Manhattan, our model "explains" over 80 percent of the variance in rent/income ratios; it is less successful in Manhattan, but even in the worst case explains 56 percent of this variance. We suspect that, if the data made it possible to do so, dividing Manhattan into several housing submarkets according to neighborhood and building type would greatly increase the explanatory power of the model. We doubt that any added household characteristics would help.

Even at its best, the model is not very useful for estimating the rent expenditures of individual households. The standard errors of estimate for individual rent/income ratios range from .08 to .12 in the various submarkets. And, if the regression equation is used to estimate rent/income ratios for individual households, the probability of the estimated value falling within one standard error of the true value is two-thirds. So, if the estimated rent expenditure of a family with an annual income of \$5,000 is \$1,250 (rent/income ratio of .25), the true value, when $S_E = .08$, may easily be as high as \$1,650 or as low as \$850.⁴

However, if we use the regression model to estimate the *mean* rent/income ratio for some well-defined group of similar households—for instance, of some particular income group—our estimate will be much more reliable. The standard errors of such mean-value estimates would range from .001 to .004 in the four regressions whose parameters are shown in Table C-7.⁵

Table C-7 also shows the results of significance (t) tests for the individual regression coefficients in each equation. Of 28 estimates of the values of these coefficients, only 5 are not significantly different from zero at the .99 level of confidence. These five suggest that the influence of size of household on rent/income ratios could easily be linear rather than quadratic in form for Manhattan controlled housing; the age and ethnic group of the head of the household may have no influence on rent/income ratios in controlled housing outside Manhattan; and there may be no difference in rent/income ratios between male and female heads of households in uncontrolled housing outside Manhattan.

⁴ Because of its simplicity, we use the standard error of estimate as our measure of reliability. Where precision in assessing the reliability of an estimate is important, the standard error of forecast is the better measure. Unlike the standard error of estimate, the standard error of forecast is not a single number, but varies with the values of the independent variables, becoming increasingly large for values farther from their sample means. For samples of the sizes shown in Table C-7, the two measures yield nearly the same results in the vicinity of the mean values of the independent variables.

⁵ The standard error of such a mean-value estimate is approximately equal to the standard error of estimate for individual values, divided by the square root of the number of observations used in fitting the regression.

Table C-1
DISTRIBUTION OF RENTER HOUSEHOLDS BY GROSS RENT EXPENDITURE:
NEW YORK CITY, 1950-1968

Gross Monthly Rent in Dollars	Thousands of Renter Households			Percentage Distribution		
	1950	1960 ^a	1968	1950	1960	1968
Under 30	141.5	24.8	4.6	8.0	1.2	0.2
30-39	328.0	74.3	21.4	18.6	3.6	1.0
40-49	483.1	175.4	52.0	27.4	8.6	2.5
50-59	333.2	298.2	115.9	18.9	14.6	5.7
60-69	150.0 ^b	354.6	199.1	8.5	17.4	9.7
70-79	120.0 ^b	282.5	250.3	6.8	13.9	12.2
80-99	106.2 ^b	370.8	467.6	6.0	18.2	22.8
100-124	103.3	204.6	348.6 ^b	5.9	10.0	17.0
125-149		126.4	229.7 ^b		6.2	11.2
150-174		81.2	145.9		4.0	7.1
175-199			76.8			3.8
200 or more		45.1	135.9		2.2	6.6
Total reporting gross rent	1,765.2	2,037.9 ^c	2,047.8 ^d	100.0	100.0	100.0
No cash rent Gross rent not reported	119.8	40.0 (c)	39.1 9.1 ^d			
Total renter households	1,885.0	2,077.9	2,096.1			
Median gross rent	\$49	\$73	\$96			
Interquartile range	23	39	59			
Upper limit	62	97	135			
Lower limit	39	58	75			

SOURCES: 1950, *U.S. Census of Housing, 1950*, Vol. II, Table G-2; 1960, *U.S. Census of Housing, 1960*, Vol. II, Table B-2, and Frank S. Kristof, *People, Housing and Rent Control in New York City*, City Rent and Rehabilitation Administration, June 1964, Table 16; 1968, tabulations by NYCRI of unit records of the New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding. Medians and quartiles were estimated by linear interpolation within rent intervals.

^a There are two sources for these data: The published Census tabulations, and retabulations of a subsample (.05 percent) reported by Kristof, op. cit. They are slightly inconsistent in detail. We have used the Census source for rent intervals up to \$119, and an adjusted version of Kristof's figures for rent intervals over \$119.

^b Household counts in source tables are given for slightly different rent intervals; they were regrouped by graphic interpolation.

^c Households not reporting gross rents were assigned gross rents by the Bureau of the Census.

^d Households reporting contract rents but not reporting gas or electricity payments were assigned allowances for these items by NYCRI.

Table C-2

DISTRIBUTION OF RENTER HOUSEHOLDS BY INCOME OF HEAD
AND RELATED PERSONS: NEW YORK CITY, 1950-1968

Income, in Dollars, in Preceding Year	1950	1960	1968	
			As Recorded	After Allocating "Not Reported"
	Thousands of Households			
Under 2,000	446.9	357.1	128.2	239.5
2,000-3,999	700.2	437.8	226.8	395.4
4,000-5,999	377.0	500.7	258.3	437.0
6,000-7,999	135.5 ^a	335.3	208.9	353.3
8,000-9,999	46.5 ^a	192.4	139.5	234.4
10,000-14,999	} 72.5	173.1	168.3	283.9
15,000-24,999		} 81.5	68.4	117.7
25,000 or more			19.8	34.8
Total reporting income	1,778.6	2,077.9 ^b	1,218.1	2,096.1
Income not reported	106.4	(b)	878.0	—
Total renters	1,885.0	2,077.9	2,096.1	2,096.1
	Percentage Distribution			
Under 2,000	25.1	17.2	10.5	11.4
2,000-3,999	39.4	21.1	18.6	18.9
4,000-5,999	21.2	24.1	21.2	20.8
6,000-7,999	7.6	16.2	17.1	16.9
8,000-9,999	2.6	9.3	11.5	11.2
10,000-14,999	} 4.1	8.3	13.8	13.5
15,000-24,999		} 3.9	5.6	5.6
25,000 or more			1.6	1.7
Total	100.0	100.0	100.0	100.0
Median income	\$3,264	\$4,971	\$5,970	\$5,880
Interquartile range	2,998	4,815	5,770	5,720
Upper limit	4,990	7,555	9,330	9,220
Lower limit	1,992	2,740	3,560	3,500

SOURCES: 1950, *U.S. Census of Housing, 1950*, Vol. II, Table G-3; 1960, *U.S. Census of Housing, 1960*, Vol. II, Table B-2; 1968, calculations by NY-CRI from unit records of the New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding. Percentage distributions are based on total households reporting or assigned income. Medians and quartiles are estimated by linear interpolation within income intervals. Methods for the allocation of households not reporting income in 1968 are described in the text.

^a Household counts in source table are given for slightly different income intervals; they were regrouped by graphic interpolation.

^b Households not reporting incomes were assigned incomes by the Bureau of the Census.

Table C-3

NUMBERS OF RENTER HOUSEHOLDS BY RENT/INCOME RATIO, WITH ANALYSIS
OF "NOT COMPUTED" CASES: NEW YORK CITY, 1950-1968

Item	Thousands of Households		
	1950	1960	1968
<i>Annual Gross Rent/Annual Income</i>			
Under .10	157.3	287.7	124.2
.10-.14	359.7	442.6	195.7
.15-.19	342.5	380.8	254.5
.20-.24	} 330.8	242.0	185.2
.25-.29		} 242.1	110.6
.30-.34			75.9
.35 or more	} 299.0	383.8	242.9
Total computed	1,489.3	1,979.0	1,189.1
Not computed	395.7	98.9	907.0
Total renter households	1,885.0 ^a	2,077.9	2,096.1
<i>Analysis of "Not Computed" Cases</i>			
No cash rent or rent not reported:	}		
No cash rent		40.0	39.1
Rent not reported		(b)	9.1 ^c
Monthly rent greater than \$999 ^d	}	—	—
Cash rent reported, but:		121.4	
No cash income or net loss		(e)	58.9
Income not reported	87.4	(b)	} 858.6
Annual income greater than \$9,999 ^d	67.1	—	
Total not computed	395.7	98.9	907.0

SOURCES: 1950, *U.S. Census of Housing, 1950*, Vol. II, Table G-3; 1960, *U.S. Census of Housing, 1960*, Vol. II, Table B-2; 1968, calculations by NYCRI from unit records of the New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding.

^a This estimate of total renter households is based on a 20-percent sample of household records. The total based on complete count is 1,907,700. Both figures exclude approximately 75,000 cases of persons living in quarters that were not counted as housing units in 1950 but would have been so counted by definitions in effect in 1960 and 1968.

^b When rent or income was not reported, it was assigned by the Census Bureau, using a missing-value program.

^c The Census Bureau's tabulations show 172,000 cases of "gross rent not reported." NYCRI assigned rents to all but 9,100, using a missing-value program.

^d Rent/income ratios could not be computed for these categories in 1950 because the unit record only showed rent or income as falling in the open-ended category.

^e Includes incomes less than \$100.

Table C-4

NUMBERS OF RENTER HOUSEHOLDS BY RENT/INCOME RATIO, WITH ALLOCATION
OF "NOT COMPUTED" CASES: NEW YORK CITY, 1950-1968

Ratio of Gross Annual Rent to Gross Annual Income	Thousands of Households		
	1950	1960	1968
No cash rent	40.0 ^a	40.0	39.1
Under .10	205.4	287.3	214.5
.10-.14	444.5	442.2	338.9
.15-.19	381.0	381.1	440.3
.20-.24	367.9	242.5	320.5
.25-.29		150.0 ^b	191.4
.30-.34	468.8	92.5 ^b	131.4
.35 or more		442.2	419.9
Total renter households	1,907.7 ^c	2,077.9	2,096.1
Cases allocated	378.4 ^d	58.9 ^e	867.9 ^f
Median rent/income ratio	.187	.188	.205
Interquartile range	.171	.188	.170
Upper limit	.300	.313	.314
Lower limit	.129	.125	.144

SOURCES: Same as for Table C-3, and Frank S. Kristof, *People, Housing and Rent Control in New York City*, City Rent and Rehabilitation Administration, June 1964.

NOTE: Distributions may not add exactly to totals because of rounding. Medians and quartiles were estimated by linear interpolation within rent/income intervals.

^a Estimated by NYCRI.

^b Data reported for the rent/income interval ".25-.34" allocated between these two intervals in proportions shown in Kristof, op. cit., Table 43.

^c Based on complete-count tabulations. The estimate from the 20-percent sample tabulations used in Table C-3 is 1,885,000.

^d Includes difference between sample and complete-count totals for renter households (22,700). Cases with monthly rents greater than \$999 or annual incomes under \$100 were assigned to ".35 or more." Cases with incomes over \$9,999 were assigned to "under .10" and ".10-.14" on the basis of reported gross rents, assuming incomes of \$10,000. Cases failing to report either rent or income and the difference between sample and complete-count totals were then distributed in the same proportions as cases for which rent/income ratios were reported or assigned.

^e Cases reporting cash rent but no cash income were assigned to ".35 or more."

^f All cases except "no cash rent" for which rent/income ratios could not be computed were distributed in the same proportion as cases for which rent/income ratios were reported.

Table C-5

**RENTER HOUSEHOLDS ON WELFARE BY CONTRACT RENT, BY HOUSEHOLD INCOME:
NEW YORK CITY, 1 JULY 1969**

Monthly Allowance for Contract Rent, ^b in Dollars	Thousands of Households by Annual Income ^a										Total
	0- \$999	\$1000- 1999	\$2000- 2999	\$3000- 3999	\$4000- 4999	\$5000- 5999	\$6000- 6999	\$7000- 7999	\$8000 or more		
No rent allowance	5.5	6.2	2.6	1.9	1.0	0.5	0.2	(c)	(c)	(c)	17.9
Under 30	0.7	7.6	0.6	0.2	0.1	(c)	(c)	(c)	(c)	(c)	9.2
30-39	0.2	10.5	1.5	0.4	0.3	0.1	(c)	(c)	(c)	(c)	13.0
40-49	0.3	14.1	3.4	1.6	0.8	0.3	0.1	(c)	(c)	(c)	20.6
50-59	0.4	14.4	9.1	3.6	1.5	0.6	0.2	0.1	(c)	(c)	29.9
60-69	0.6	25.9	15.3	6.5	2.5	1.2	0.5	0.2	0.1	(c)	52.8
70-79	0.5	16.6	20.3	8.8	3.0	1.6	0.8	0.4	0.1	(c)	52.1
80-89	0.3	7.9	17.2	6.9	6.6	2.8	1.2	0.4	0.2	(c)	43.5
90-99	0.2	2.9	6.7	9.7	4.5	2.1	0.9	0.4	0.1	(c)	27.5
100-109	0.1	0.4	4.2	6.3	3.2	1.5	0.7	0.3	0.1	(c)	16.8
110-119	(c)	0.2	1.5	3.3	2.5	1.1	0.4	0.2	0.1	(c)	9.3
120-129	(c)	0.1	0.9	2.4	2.0	2.1	1.1	0.4	0.2	(c)	9.2
130-149	(c)	0.1	0.4	0.9	1.5	1.9	1.2	0.5	0.3	(c)	6.8
150-199	(c)	(c)	0.1	0.4	0.7	1.1	1.0	0.9	0.6	(c)	4.8
200 or more	(c)	(c)	(c)	(c)	0.1	0.1	0.1	0.1	0.2	(c)	0.6
Total	8.8	106.9	83.7	53.0	30.1	17.0	8.4	4.0	2.0	(c)	314.1

SOURCE: Tabulations by the Bureau of the Budget of records of the Department of Social Services, Human Resources Administration.

NOTE: Distributions may not add exactly to totals because of rounding. The table covers all renter households containing one or more persons receiving payments from the Department of Social Services (DSS). Welfare recipients under institutional care are excluded.

^a Includes public assistance grants from DSS and income from other sources.

^b Equal to actual contract rent except for housing units shared with unassisted persons; in these cases, the contract rent of the unit is prorated. DSS makes a separate allowance for utilities.

^c Less than 50 households.

Table C-6

RENTER HOUSEHOLDS ON WELFARE AND NOT ON WELFARE, BY RENT/INCOME RATIO:
NEW YORK CITY, 1968

Ratio of Gross Annual Rent to Gross Annual Income	Welfare Households July 1969 ^a	Welfare Households May 1968 ^b	All Renter Households 1968 ^c	Nonwelfare Households 1968 ^d
	Thousands of Households			
No cash rent	17.9	14.9	39.1	24.2
Under .10	1.0	0.8	214.5	213.7
.10-.14	7.6	6.3	338.9	332.6
.15-.19	17.8	14.8	440.3	425.5
.20-.24	23.4	19.4	320.5	301.1
.25-.29	39.7	33.0	191.4	158.4
.30-.34	41.5	34.4	131.4	97.0
.35 or more	165.0	137.0	419.9	282.9
Total	314.1	260.6	2,096.1	1,835.5
	Percentage Distribution			
Under .10	0.4	0.4	10.4	11.8
.10-.14	2.5	2.5	16.5	18.3
.15-.19	6.0	6.0	21.4	23.5
.20-.24	7.9	7.9	15.6	16.6
.25-.29	13.4	13.4	9.3	8.7
.30-.34	14.0	14.0	6.4	5.4
.35 or more	55.7	55.7	20.4	15.6
Total paying cash rent	100.0	100.0	100.0	100.0
Median rent/income ratio	(e)	(e)	.205	.192
Interquartile range	—	—	.170	.141
Upper limit	(e)	(e)	.314	.277
Lower limit	.282	.282	.144	.136

SOURCES: Tables C-4 and C-5 and computations by NYCRI.

NOTE: Distributions may not add exactly to totals because of rounding. Medians and quartiles were estimated by linear interpolation within rent/income intervals.

^a Rent/income ratios for welfare households as of 1 July 1969 were estimated from the distributions of 314,100 welfare households by contract rent by income. This household count excludes a few welfare households recorded as homeowners.

^b The welfare caseload in May 1968 was 83 percent of the caseload of July 1969. The distribution by case type on the two dates was very similar. The entries in this column were obtained by multiplying the entries in the preceding column by .83.

^c From Table C-4.

^d All renter households minus welfare households.

^e Greater than .35.

Table C-7

RENT/INCOME RATIOS AS FUNCTIONS OF INCOME AND HOUSEHOLD CHARACTERISTICS:
FOUR HOUSING SUBMARKETS IN NEW YORK CITY, 1968

Item	Controlled Housing		Uncontrolled Housing	
	Manhattan	Non-Manhattan	Manhattan	Non-Manhattan
<i>Regression Parameters</i>				
Regression constant	.17784	.00917	.14014	.04555
1/(Income in \$1,000)	.76638	.90718	1.22022	1.23049
Number of persons	.01788	.01534	.05846	.01864
(Number of persons) ²	-.00142 ^a	-.00087	-.00636	-.00147
Age of household head	-.00536	-.00009 ^a	-.00486	-.00147
(Age of household head) ²	.00004	.00000 ^a	.00006	.00002
Sex of household head:				
Male	.00000	.00000	.00000	.00000
Female	.02923	.01004	.02899	.00078 ^a
Ethnic group of household head:				
White non-Puerto Rican	.00000	.00000	.00000	.00000
Nonwhite or Puerto Rican	-.03195	-.00067 ^a	-.12650	-.01496
<i>Regression Statistics</i>				
Coefficient of determination (R ²)	.66	.81	.56	.82
Standard error of estimate (SE)	.10	.08	.12	.08
Number of observations	2,009	4,470	1,097	3,885

SOURCE: Calculations by NYCRI from unit records of the New York City Housing and Vacancy Survey of 1968.

^a Not significantly different from zero at the .01 level of significance.

Table C-8

GROSS RENT EXPENDITURES AS FUNCTIONS OF INCOME AND HOUSEHOLD
CHARACTERISTICS: FOUR HOUSING SUBMARKETS IN NEW YORK CITY, 1968

Component of Annual Gross Rent Expenditure	Controlled Housing		Uncontrolled Housing	
	Manhattan	Non-Manhattan	Manhattan	Non-Manhattan
Basic expenditure for all households	\$766.38	\$907.18	\$1,220.02	\$1,230.49
Add, per \$1,000 of annual income:				
For all households	177.84	9.17	140.14	45.55
Per household member	17.88	15.34	58.46	18.64
Per (household member) ²	-1.42	-.87	-6.36	-1.47
Per year of age of head	-5.36	-.09	-4.86	-1.47
Per (year of age of head) ²	.04	.00	.06	.02
For female head of household	29.23	10.04	28.99	.78
For nonwhite or Puerto Rican head of household	-31.95	-.67	-126.50	-14.96

SOURCE: Calculated from data in Table C-7.

Appendix D

SUPPLEMENTARY DATA ON RENT CONTROL AND THE DEMAND FOR HOUSING

COMPARING THE TENANTS OF CONTROLLED AND UNCONTROLLED HOUSING

Tables D-1 through D-8 compare tenants of controlled and uncontrolled housing units with respect to a variety of household and housing characteristics. These tables are the sources of Figs. 19-24 in Ch. V.

The data for all of these tables were drawn from the New York City Housing and Vacancy Survey of 1968. As explained in Appendix A, this survey was conducted by the U.S. Bureau of the Census under contract to the Office of Rent Control, HDA. The Bureau constructed a stratified cluster sample of housing units, sampling some strata more intensively than others. The final sample list included about 36,000 located housing units. Each of these was assigned a weight equal to the reciprocal of its probability of selection. Occupancy status was determined for all housing units on the list, and interviews were completed with the inhabitants of 97.7 percent of all occupied units. The weights assigned to these units were adjusted to compensate for noninterviews. Thus, the number of households in New York City with any given characteristic can be estimated simply by summing the weights assigned to all sample households reporting this characteristic, with the qualification that some household records are incomplete. Omissions are due either to the inability or unwillingness of the respondent to give the data requested, or to the carelessness of the interviewer in filling out his field sheet.

Although rental tenants were asked whether their housing was under rent control,¹ the control status of each rental unit, whether occupied or vacant, was determined from records of the Office of Rent Control. Five categories were distinguished: controlled, decontrolled, never controlled, public, and Single-Room Occupancy (SRO) housing. Controlled housing includes all units except SROs whose rents were regulated by the Office of Rent Control at the time of the survey. Decontrolled

¹ Excluding tenants of SROs, one-fourth either did not know or answered incorrectly.

housing includes all units except SROs that were formerly but not currently subject to these regulations.² Never-controlled housing includes nearly all units except SROs built after February 1, 1947; about 38,000 of these, built with State or City assistance, are regulated by the Office of Management Services, HDA, under entirely different laws from those governing the Office of Rent Control. Public housing consisted in 1968 of 144,000 units owned and operated by the New York City Housing Authority.

Single-Room Occupancy units are quarters designated by the Department of Buildings as illegal for family occupancy because they lack complete private bath and kitchen facilities. In 1968, about 73,000 such units nonetheless met the Bureau of the Census's definition of a housing unit. Most of these are nominally under the jurisdiction of the Office of Rent Control, but controls have been ineffective, primarily due to the transiency of their tenants.

In Ch. V, we try to show some of the consequences of rent control by comparing the household and housing characteristics of tenants of rent-controlled units with those of tenants whose housing is not subject to public regulation. Our "uncontrolled" sector includes both decontrolled and never-controlled housing; it excludes SROs (whose control status is ambiguous) and public housing (whose rents are regulated, though not by the Office of Rent Control). The data did not permit us to exclude from the uncontrolled sector the 38,000 units of middle-income housing regulated by the Office of Management Services, but these account for only 6 percent of all "uncontrolled" units.

Tables D-1 through D-8 cover only occupied housing units in our two categories. Tabulations by the Bureau of the Census show 1,267,000 occupied controlled units and 612,000 occupied uncontrolled units. The number of households is by definition the same as the number of occupied housing units; however, household totals by control status vary from table to table. There are two reasons for these variations: (a) some of the totals include only those households reporting on particular characteristics other than control status; (b) some tables are based on tabulations prepared by the Bureau of the Census and others are based on our own tabulations of unit records from the survey. With any large data file, differences in tabulation algorithms lead to minor differences in results.

DETERMINANTS OF RESIDENTIAL RENTS: REGRESSION ANALYSIS

Tables D-9 and D-10 compare the gross rents reported in 1968 by tenants of controlled housing units with our estimates of the gross rents these same units would have commanded on an unregulated market. Our estimates are based on

² Rent controls on privately owned rental units have been in effect since 1943. Over the years, amendments to the law have permitted selective decontrol for about 224,000 units still in use in 1968. These include most units whose ceiling rents on April 1, 1960, were greater than \$250; units in one- or two-family houses if vacated by their tenants after April 1, 1953; units occupied by their owners for a specified period of time; and units that have been substantially rebuilt.

multiple-regression analysis of the rents and physical characteristics of uncontrolled housing as reported by the New York City Housing and Vacancy Survey of 1968. Briefly, we developed equations expressing reported gross rents for *uncontrolled* housing units as functions of their physical characteristics. Applying these equations to the reported physical characteristics of *controlled* housing units, we estimated what their rents might have been in the absence of rent control. The purpose of this exercise was to estimate the financial benefits accruing to tenants of controlled housing because of public regulation of their rents. These benefits are defined for a given household as the difference between the market rent and the controlled rent of the housing unit occupied by that family.³

This appendix describes the methods and data used to fit the estimating equations for market rent. Under the constraints of data reported by the Housing and Vacancy Survey, two equations were developed: one applied to units in multiple dwellings and the other applied to units in one- and two-family houses.

Estimating Market Rents for Multiple Dwellings

The estimating equation for market rents of units in multiple dwellings is based on data for 6,747 privately owned renter-occupied apartments whose tenants paid cash rent, apartments that were either decontrolled or never subject to control. Single-Room Occupancy units were excluded from the sample.

For each apartment, data on the following physical characteristics were available directly from the unit records of the Housing and Vacancy Survey:

- Location of building (borough)
- Type of structure and/or year built (e.g., Old-Law, New-Law, Post-1929, etc.)
- Number of units in structure (by class interval)
- Number of stories in structure (1 to 6, 7 or more)
- Elevator/no elevator in structure
- Condition of structure (sound/not sound)
- Story on which unit is located (1 to 6, 7 or higher)
- Number of rooms in unit (1 to 7, 8 or more)
- Unit furnished/unfurnished

The dependent variable was gross monthly rent, i.e., the sum of contract rent and utility expenditures reported by the tenant. In about 8 percent of the cases, utility expenditures by the tenant were indicated but the amount was not reported; we estimated these amounts using an empirically based relationship between utility expenditures and number of rooms per unit.⁴

³ Strictly speaking, the benefits are slightly less. A consumer will always value income in kind (e.g., that portion of the market value of his housing for which he does not have to pay) at less than its cash value because he is not free to allocate this income according to his private preferences as he would be if it were cash income.

⁴ See Appendix C.

Because most multiple dwellings built before 1947 are subject to rent control, our sample of uncontrolled rental units is heavily weighted with buildings of more recent vintage, as shown below. Given our intention to use the rent equation fitted from these data for estimating the market rents of controlled units, this characteristic difference in building age is unfortunate. Along the same lines, we should note that 97.5 percent of the uncontrolled units in our sample were reported to be in "sound" structures, leaving about 172 observations of other-than-sound condition; in the controlled sector, deteriorated and dilapidated units account for about 29 percent of the total. With respect to the remaining seven physical characteristics, neither sector is so specialized as to raise problems of comparability.

Type of Structure and Year Built	Number of Units	Percentage Distribution
Multiple dwelling, 1960-1968	4,732	70.1
Multiple dwelling, 1947-1959	1,278	18.9
Multiple dwelling, 1930-1946	31	0.5
New-Law tenement, 1901-1929	291	4.3
Old-Law tenement, 1900 or earlier	173	2.6
1-2 family house converted to apartments ^a	242	3.6
Total	6,747	100.0

^a Includes a small number of miscellaneous Class B (transient) dwellings.

By using dummy (0,1) variables to represent each type of structure shown above, we are able to make explicit the rental premium or discount associated with each type even though it may be represented in the sample by relatively few units. By including post-1947 multiple dwellings in the sample—housing that is not directly relevant to the problem of assessing the value of pre-1947 controlled dwellings—we are able to get enough observations on characteristics other than structure type to greatly buttress our estimates of the market values associated with such features as location and size of unit.

We should also note that the 737 multiple dwelling units in our sample that were built prior to 1947⁵ are necessarily decontrolled units that may differ significantly from controlled units of the same age, condition, size, location, etc. Most decontrolled multiple dwellings fall into one of two classes: units renting for \$250 or more in 1960 and units substantially altered by structural renovation. To some extent, these peculiarities may be accounted for by other variables in our estimating

⁵ This figure includes "Conversions and Class B" structures, whose vintage, while pre-1947, can not be determined more exactly.

equation: location, size of unit, condition of structure. But there is doubtless a residual bias in allowing these units to "stand" for pre-1947 vintage.

After considerable experimentation, testing each result for explanatory power (R^2) and standard error of estimate (S_E), as well as for ease of interpretation, we arrived at the regression equation shown in tabular form in Table D-11. Fitted by the method of least squares, the equation "explains" about 51 percent of the total variance of gross rent about its mean value. In about two-thirds of all cases, the rental value estimated by the equation falls within \$68 of the reported gross rents.

The signs and magnitudes of the regression coefficients shown in Table D-11 strike us as generally reasonable and consistent with our intuitive perceptions of how people value particular characteristics of a dwelling place. All other things equal, they pay more for larger apartments, and more for furnished ones, more for those in sound buildings, and less for those in older buildings.⁶ Apartments on upper floors carry a premium only if the building has an elevator.

The variations in rent by borough indicated by the analysis also fit our impressions of the relative costs of housing in each borough; the most expensive is Manhattan, followed by Queens, Brooklyn, Bronx, and Richmond in that order.

Within boroughs, we have no direct measures of locational advantage, but common observation suggests that tall buildings with many units are most commonly found in central locations. As Table D-11 shows, rents tend to *decrease* with number of stories and *increase* with number of units, suggesting that the preferred configuration is a large, low-rise building, such as those lining the Grand Concourse in the Bronx. Whether these preferences relate to the characteristics of the building itself or to the kind of neighborhood in which it usually occurs is hard to say.

The three variables that loom largest in determining the market rents of individual apartments are borough of location, type and age of structure, and number of rooms in the apartment itself. The first two (like all the minor variables except furnishings) are assumed by the regression model to affect rental value independently of apartment size: The borough and structure-type premiums are expressed *per unit*, not *per room*. Since fully 65 percent of the sample units had either three or four rooms, this assumption is fairly serviceable. The regression coefficient attached to "number of rooms," however, is more troublesome.

All other things equal, we found that each room (unfurnished) adds nearly \$42 to gross rent, a marginal cost that is not permitted by the regression model to change with apartment size. We were bothered, however, by the apparently contrary evidence of simple cross-tabulations of gross rent per unit by size of unit. These tabulations, which do not control for other characteristics of the unit, seem to indicate that rent does not vary regularly with number of rooms. Consequently, we

⁶ For only one type and age of structure is the coefficient anomalous. The highest premium (\$97) is associated with units in multiple dwellings built between 1930 and 1946, more than twice the premium associated with post-1960 buildings (\$42). Our sample contained 31 units in buildings of 1930-1946 vintage, almost all of which were located in large structures in Manhattan. The apartments are large and the buildings are in sound condition: they were obviously decontrolled under the provision of the 1964 amendment that allowed decontrol for apartments whose rents were greater than \$250 per month. Their tenants in 1968 were white, with middle-to-high incomes. This seems to be a case in which older buildings are simply better designed and more solidly constructed than newer ones.

undertook a special regression analysis of the sample data described above, one designed to be more sensitive to variations in apartment size while controlling, as before, on other physical characteristics. In this analysis, each apartment size of two or more rooms was treated as a dummy variable whose fitted coefficient was unconstrained by the values of the coefficients of other apartment sizes. The results are shown below:⁷

Number of Rooms ^a	Amount Added to Gross Monthly Rental Value		
	Total	Marginal	Average per Room
1	\$ 54.77	—	\$54.77
2	73.83	\$ 19.06	36.92
3	116.68	42.85	38.89
4	159.37	42.69	39.84
5	194.18	34.81	38.84
6	232.61	38.43	38.77
7	299.40	66.79	42.77
8+	544.25	244.85	68.03

^a Unfurnished.

Since each apartment necessarily has at least one room, the estimated rental value of the first room appears in this model as the intercept value of \$54.77, shown as the first entry in the "Total" column of the above table. For apartments of each larger size, we have added to the intercept value an apartment-size value also determined by the least-squares regression. The resulting values in the "Total" column omit the contributions to rent of other explicit variables such as condition or location of structure. To represent a concrete case (e.g., a sound unit located in Brooklyn, etc.), premiums and discounts similar to those of Table D-11 would have to be included.

The implied marginal value of each additional room is far from constant. In fact, it is not even monotonic. Though the estimates for apartments of the two largest sizes are based on very few observations (7 rooms, 28 cases; 8 or more rooms, 16 cases), significance tests show that the sharp increase in the marginal values of the seventh and eighth rooms cannot be attributed to sampling variability. We assume, however, that we are here encountering luxury apartments whose room-counts serve as proxies for quality features not otherwise captured by our model.

In any event, we find the exercise reassuring. The last column above shows that, despite the fluctuations of marginal value, the average value per room is

⁷ This regression analysis also yielded parameter estimates for all the other variables shown in Table D-11, but the values were only trivially different and are not presented here.

remarkably flat for units of two to six rooms, the empirically relevant range.⁸ Indeed, within this range, estimates of market rent come out about the same whether the room-count is multiplied by a flat \$42 or whether the values shown above are used. Only for apartments of one room and for those of seven or more rooms does the more complex approach reveal any substantial advantage.

Estimating Market Rents for One- and Two-Family Houses

The estimating equation for market rents of units in one- and two-family houses is based on data for 2,403 privately owned renter-occupied units of this type whose tenants paid cash rent, units that were either decontrolled or never subject to control.

For each unit, data on the following physical characteristics were available directly from the unit records of the Housing and Vacancy Survey:

- Location of building (borough)
- Year built (before 1947, 1947-1959, 1960-1968)
- Condition of structure (sound/not sound)
- Number of rooms in unit (1 to 7, 8 or more)
- Unit furnished/unfurnished
- Owner in building/not in building

Again, the dependent variable was gross monthly rent as reported by the tenant, with the same qualifications as noted above for units in multiple dwellings.

Our sample of uncontrolled units in one- and two-family houses differs from the multiple-dwelling sample in consisting predominantly of pre-1947 structures (57 percent of the total). Most of these pre-1947 units were once under rent control; unlike units in multiple dwellings, they were subject to decontrol when a vacancy occurred. As a consequence, only 62,000 such units were still under rent control in 1968.

Table D-12 shows the coefficients of the regression equation fitted to these data by the method of least squares. The equation "explains" only 42 percent of the total variance of gross rents about their mean value, but the standard error of estimate is only \$32. This implies that, in about two-thirds of all cases, the rental value estimated by the equation falls within \$32 of the reported gross rent. All of the regression coefficients except that for furniture are significantly different from zero at the 5-percent level of confidence, but sampling variability could account for the differences between the coefficients for location in the Bronx and in Brooklyn, as well as the differences between Brooklyn and Queens.

It is noteworthy that the locational premiums for these units are quite similar to those for units in multiple dwellings (see Table D-11). So are the premiums associated with age of structure, insofar as the two data-sets are comparable. The premium for sound condition is much lower for houses than for multiple dwellings.

⁸ About 96 percent of all 1968 controlled units are in this range.

What is most striking, however, is the relatively low value of space in houses as contrasted with apartments: \$15 vs. \$42 per room. We do not fully understand the reasons for this difference; it may reflect smaller room sizes in one- and two-family houses and lower land costs associated with outlying locations within the boroughs.

ESTIMATING MARKET RENTS FOR CONTROLLED HOUSING

To estimate the market rental values of controlled housing units, the regression equations presented in Tables D-11 and D-12 were applied to the 1968 Housing and Vacancy Survey's sample of such units, excluding from the test those that were unoccupied or for which the unit record failed to report either controlled gross rent or any of the physical characteristics needed to employ the formulas. Those with complete records represented about 1,056,000 of the City's 1,179,000 occupied controlled units in multiple dwellings and 54,700 of the City's 63,000 occupied controlled units in one- and two-family houses, excluding in both cases units whose tenants paid no cash rent. For each unit, the estimated market rent was compared with the actual controlled rent, with the results shown in Table D-9 by type of structure and in Table D-10 by location.

Altogether, we were able to make this comparison for sample units representing 1,110,673 out of a total of 1,239,000 controlled housing units occupied by tenants who paid cash rent. With our coverage so nearly complete, we could safely generalize to the full universe without resorting to complex stratifications. We simply computed the arithmetic means of market rents and actual rents, separately for multiple dwellings and for one- and two-family houses, and multiplied these means by the numbers of units in the appropriate population. We estimated by this method that the aggregate annual market rental value in 1968 of the 1,239,000 controlled units whose tenants paid cash rent was \$2,209 million. Controlled rents for the same units amounted, on an annual basis, to \$1,402 million. In other words, tenants of rent-controlled housing benefited by about \$807 million per year, roughly \$650 per family.

EFFECTS OF RENT CONTROL ON HOUSING EXPENDITURES

To estimate the extent to which rent control has influenced housing expenditures in New York City, we compared the rents paid in 1968 by tenants of controlled housing with the rents paid by similar tenants of uncontrolled housing. In making this comparison, we relied on the results of the rent-expenditure analysis reported in Appendix C.

There, we described the derivation of two equations for estimating rent expenditures by tenants of uncontrolled housing—one for those living in Manhattan and one for those living in other boroughs. These equations express 1968 rent

expenditures as functions of household income, household size, and the age, sex, and ethnic background of the head of the household. (See Tables C-7 and C-8.)

From the unit records of the Housing and Vacancy Survey of 1968, we selected a subsample of 6,479 households living in controlled housing units for which they paid cash rent, choosing only those records for which household income, household size, the age, sex, and ethnic background of the head of the household, and the household's gross rent expenditures were reported.⁹ The records selected represented 708,000 households, about 57 percent of all households paying cash rent for controlled housing units. In nearly all cases, the records rejected lacked only data on income or age of head, items on which response was poor.

Taking each record in the subsample, we applied the appropriate "uncontrolled" rent-expenditure equation to the household's recorded characteristics, estimating how much a household with those characteristics would have paid for rent had it behaved like a typical "uncontrolled" household with the same characteristics. We call this amount the *hypothetical rent expenditure* of the "controlled" household.

We then compared this estimate with the *actual rent expenditure* by that household for the controlled housing it occupied at the time of the survey. We interpret the difference as an estimate of *the rent increase that the family would have tolerated if deprived of access to housing priced below its market value and offered housing equivalent in location, size, and quality to the housing occupied by its counterpart family in the uncontrolled sector.*

Note that this counterpart housing might be better or worse in particular respects than the family's present quarters. In general, it was likely to be a smaller but better maintained unit in a newer building. Note also that the procedure assumes that by statistically controlling on location, income, household size, and age, sex, and ethnic background of the household head, we have captured all of the variables that systematically and substantially differentiate the housing expenditure preferences of New York City's residents. *Random* differences in tastes or in constraints on expenditure not reflected in gross income certainly exist; they do not affect our conclusions so long as we confine our estimates to large groups of households.

Table D-13 summarizes the results of our computation, grouping sample households by income. The hypothetical and actual rents shown for each income-group are mean values for households in that group, each observation weighted by its sample expansion factor. Table 24 in Ch. V provides another summary, with households grouped by ethnic background and sex of head, for residents of Manhattan and residents of other boroughs.

As noted above, our sample represents only about 57 percent of the parent population. The next step was to generalize our findings to include the remaining 43 percent of all households paying cash rent for controlled housing. To do this, we computed from our sample the arithmetic mean of both hypothetical and actual rent

⁹ We included cases in which contract rent was reported but utility payments were not; as explained in Appendix C, we were able to estimate gross rents for these cases.

expenditures for each of the eight groups distinguished in Table 24, and assigned these mean values to the corresponding groups in the parent population. We chose these particular groups because reporting on location (Manhattan, non-Manhattan) was complete and reporting on sex and ethnic background of the head of the household was nearly complete.¹⁰

Multiplying the mean rental values assigned to each group by the number of households in that group, we estimated the total hypothetical rent expenditure in 1968 by tenants of controlled housing (\$2,175 million) and the total actual rent expenditure (\$1,406 million). In other words, judging by the budgetary behavior of families living in uncontrolled housing, those living in controlled housing were underspending by about \$769 million annually.

Our procedure for generalizing from the sample data assumes that, within each of the eight groups, households failing to report income, age of head, or other pertinent information, were not systematically different in these respects from households reporting on these items. One check on this assumption is a separate tabulation of actual rent expenditures for almost all rent-paying households living in controlled units that were included in the Housing and Vacancy Survey's sample.¹¹ This tabulation yielded an annual gross rent expenditure of \$1,408 million, negligibly different from the total of \$1,406 million obtained by the stratified mean-value method described above. Another check is the expansion by type of structure reported in the preceding section of this appendix, which yielded an estimated actual rent expenditure by the same population of \$1,402 million.

Our estimate of the mean hypothetical gross rent expenditure for all tenants of controlled housing is \$146 per month, about \$51 per month more than the mean gross rent reported by these same tenants, and about \$16 per month less than the mean gross rent reported by tenants of uncontrolled housing.¹² Given the fact that the median reference income of "controlled" tenants in 1968 was about \$3,500 less than the median reference income of uncontrolled tenants (see Table D-5), we were expecting the mean hypothetical rent of "controlled" tenants to fall considerably more than \$16 short of the mean reported rent of "uncontrolled" tenants.

However, a review of the rent expenditure functions presented in Table C-8 makes it clear that we should not have been surprised at this result. The data presented there indicate that, except for white households living in uncontrolled Manhattan apartments, rent expenditures increased by about 6 cents for each added dollar of income. Adding \$3,500 to income should therefore add about \$210 per year or \$17.50 per month to rent expenditures.

¹⁰ These two items were reported for about 97 percent of all households paying cash rent for controlled units; we allocated the remaining 3 percent among our eight household groups.

¹¹ About 92 percent of these households reported gross rent, and virtually all reported contract rent; for those reporting contract rent but not gross rent, we estimated utility expenditures to derive their gross rents. See Appendix C.

¹² Note that these are arithmetic means. Earlier discussions of rent distributions in this volume have usually cited medians, not means. This was because tabulations of rents and incomes taken from the decennial censuses and from the Housing and Vacancy Surveys are so constructed that the computation of mean values is not possible.

Table D-1

PERCENTAGE DISTRIBUTION OF RENTER HOUSEHOLDS WITH SELECTED CHARACTERISTICS,
BY CONTROL STATUS OF HOUSING: NEW YORK CITY, 1968

Household Characteristic	Thousands of Households Reporting ^a	Percentage Distribution by Control Status		
		Controlled Housing	Uncontrolled Housing	Total
All renter households ^b	1,879	67.4	32.6	100.0
<i>Size of Household</i>				
1 person	514	71.9	28.1	100.0
2-4 persons	1,165	64.9	35.1	100.0
5-7 persons	182	70.3	29.7	100.0
8 or more persons	20	65.0	35.0	100.0
<i>Sex and Age of Head</i>				
Male	1,111	63.9	36.1	100.0
Under 25 years	71	59.1	40.9	100.0
25-44 years	482	59.0	41.0	100.0
45-64 years	386	66.0	34.0	100.0
65 years and over	171	75.2	24.8	100.0
Female	471	74.7	25.3	100.0
Under 25 years	37	68.9	31.1	100.0
25-44 years	150	71.2	28.8	100.0
45-64 years	163	74.9	25.1	100.0
65 years and over	121	80.4	19.6	100.0
<i>Ethnic Group of Head</i>				
White non-Puerto Rican	1,363	62.7	37.3	100.0
Nonwhite non-Puerto Rican	309	76.7	23.3	100.0
Puerto Rican	175	88.6	11.4	100.0
<i>Income of Head and Related Persons</i>				
Under \$2,000	103	86.3	13.6	100.0
2,000-3,999	189	83.3	16.7	100.0
4,000-5,999	215	76.2	23.8	100.0
6,000-7,999	184	68.4	31.6	100.0
8,000-9,999	130	60.1	39.9	100.0
10,000-14,999	163	48.3	51.7	100.0
15,000-24,999	68	40.8	59.2	100.0
25,000 or more	20	33.8	66.2	100.0

SOURCE: Unpublished tabulations, New York City Housing and Vacancy Survey of 1968.

NOTE: Percentage distributions may not add exactly to 100.0 because of rounding.

^a Number of households reporting differ for each household characteristic and do not necessarily equal "all renter households."

^b Excludes tenants of Single-Room Occupancy units and public housing.

Table D-2

DISTRIBUTION OF RENTER HOUSEHOLDS IN CONTROLLED AND UNCONTROLLED HOUSING,
BY SELECTED HOUSEHOLD CHARACTERISTICS: NEW YORK CITY, 1968

Household Characteristic	Controlled Housing		Uncontrolled Housing	
	Thousands of Households Reporting ^a	Percentage Distribution	Thousands of Households Reporting ^a	Percentage Distribution
All renter households ^b	1,267	100.0	612	100.0
<i>Size of Household</i>				
1-2 persons	781	61.7	353	57.7
3-4 persons	345	27.2	198	32.4
5-7 persons	128	10.1	54	8.8
8 or more persons	13	1.1	7	1.2
Total, all reporting	1,267	100.0	612	100.0
<i>Sex and Age of Head</i>				
Male	710	66.9	401	77.1
Under 25 years	42	4.0	29	5.6
25-44 years	285	26.8	198	38.1
45-64 years	254	23.9	131	25.2
65 years and over	129	12.1	42	8.1
Female	352	33.1	119	22.9
Under 25 years	25	2.4	11	2.1
25-44 years	107	10.1	43	8.3
45-64 years	122	11.5	41	7.9
65 years and over	97	9.2	24	4.6
Total, all reporting	1,062	100.0	520	100.0
<i>Ethnic Group of Head</i>				
White non-Puerto Rican	855	68.6	508	84.7
Nonwhite non-Puerto Rican	237	19.0	72	12.0
Puerto Rican	155	12.4	20	3.3
Total, all reporting	1,247	100.0	600	100.0
<i>Income of Head and Related Persons</i>				
Under \$2,000	89	12.2	14	4.1
2,000-3,999	157	21.6	31	9.0
4,000-5,999	164	22.5	51	14.8
6,000-7,999	126	17.3	58	16.9
8,000-9,999	78	10.7	52	15.1
10,000-14,999	78	10.7	84	24.6
15,000-24,999	28	3.8	40	11.7
25,000 or more	7	1.0	13	3.9
Total, all reporting	728	100.0	344	100.0

SOURCE: Unpublished tabulations, New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding.

^a Number of households reporting differs for each household characteristic and does not necessarily equal "all renter households."

^b Excludes tenants of Single-Room Occupancy units and public housing.

Table D-3
 RENTER HOUSEHOLDS IN CONTROLLED HOUSING BY HOUSEHOLD SIZE
 AND INCOME: NEW YORK CITY, 1968

Income in 1967 Dollars	Thousands of Households by Household Size ^a							
	1	2	3	4	5	6	7	8+
Under 1,000	23.1	6.2	1.7	0.3	0.4	0.2	0.2	0.0
1,000-1,999	79.6	35.5	9.0	3.7	1.4	0.8	0.1	0.1
2,000-2,999	38.4	48.6	18.8	8.8	4.8	2.8	0.7	0.8
3,000-3,999	47.2	43.4	19.2	17.2	9.8	3.6	1.8	1.4
4,000-4,999	37.0	43.3	22.7	15.6	9.3	5.3	2.6	3.2
5,000-5,999	43.1	38.3	23.9	16.9	8.7	3.0	1.6	2.6
6,000-6,999	27.4	41.4	20.2	13.2	9.5	4.2	1.3	1.2
7,000-7,999	18.2	31.0	19.3	13.1	7.9	3.6	1.0	0.9
8,000-8,999	12.7	26.3	13.0	13.4	6.8	2.9	0.7	0.3
9,000-9,999	7.4	18.0	11.0	9.7	3.8	2.6	0.6	0.6
10,000-10,999	9.6	22.2	10.9	8.7	3.7	1.6	0.4	0.7
11,000-11,999	3.6	7.2	7.3	3.2	2.2	1.4	0.1	0.3
12,000-12,999	3.3	9.2	4.8	3.8	1.2	0.8	0.3	0.0
13,000-13,999	1.8	5.6	2.8	1.4	1.2	0.6	0.1	0.1
14,000-14,999	1.0	3.5	2.7	2.0	1.1	0.3	0.3	0.1
15,000-19,999	6.2	12.1	5.0	5.8	2.7	0.6	0.3	0.0
20,000 or more	4.4	11.4	2.4	4.8	1.7	0.0	0.4	0.1
Totals	363.9	403.3	194.6	141.5	76.1	34.3	12.6	12.5
Median income	\$3,866	\$5,594	\$6,990	\$6,629	\$6,379	\$6,357	\$5,562	\$5,269
Interquartile range	4,311	5,154	4,862	5,056	4,499	4,533	3,989	2,861
Upper limit	6,164	8,396	8,862	9,402	8,779	8,759	8,143	7,111
Lower limit	1,853	3,242	4,000	4,346	4,280	4,226	4,154	4,250

SOURCE: Calculations by NYCRI from unit records of the New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding. Medians and quartiles were estimated by linear interpolation within income intervals.

^a Excludes households paying no cash rent. Households of each size not reporting income were distributed to income intervals according to distribution of households of that size reporting income.

Table D-4
 RENTER HOUSEHOLDS IN UNCONTROLLED HOUSING BY HOUSEHOLD SIZE
 AND INCOME: NEW YORK CITY, 1968

Income in 1967 Dollars	Thousands of Households by Household Size ^a							
	1	2	3	4	5	6	7	8+
Under 1,000	2.7	0.5	0.0	0.2	0.0	0.0	0.0	0.0
1,000-1,999	14.8	5.2	2.7	0.2	0.7	0.0	0.1	0.0
2,000-2,999	9.7	11.1	3.0	0.8	0.8	0.1	0.0	0.5
3,000-3,999	9.0	11.8	4.1	3.6	1.4	0.8	0.3	0.2
4,000-4,999	11.4	8.8	5.3	4.2	2.3	1.8	1.0	0.5
5,000-5,999	14.4	15.4	9.4	6.4	3.1	1.5	1.0	1.8
6,000-6,999	15.8	12.9	10.0	5.3	3.4	1.0	0.6	1.0
7,000-7,999	13.9	14.4	9.2	9.5	3.5	1.0	0.4	0.5
8,000-8,999	13.7	13.6	12.0	7.6	2.5	2.0	0.4	0.8
9,000-9,999	6.0	12.3	8.2	5.9	3.2	1.3	0.2	0.0
10,000-10,999	11.0	20.7	10.7	12.7	3.6	1.3	0.7	0.5
11,000-11,999	2.1	9.3	5.4	2.8	1.9	0.5	0.2	0.3
12,000-12,999	2.8	11.6	6.3	4.2	0.9	0.3	0.4	0.2
13,000-13,999	1.4	8.8	4.3	2.0	1.0	0.6	0.2	0.0
14,000-14,999	0.5	6.5	3.8	2.6	0.9	0.3	0.3	0.0
15,000-19,999	5.8	23.3	10.0	8.2	2.1	0.2	0.0	0.0
20,000 or more	6.7	19.4	8.0	5.9	2.8	0.3	0.0	0.4
Totals	141.8	205.6	112.5	82.2	33.9	13.1	5.8	6.6
Median income	\$6,563	\$ 9,740	\$ 9,061	\$ 9,559	\$ 8,720	\$ 8,200	\$ 6,833	\$6,300
Interquartile range	5,256	7,841	6,338	5,590	5,415	4,831	5,571	3,403
Upper limit	9,167	13,750	12,698	12,571	11,474	10,231	10,571	8,625
Lower limit	3,911	5,909	6,360	6,981	6,059	5,400	5,000	5,222

SOURCE: Calculations by NYCRI from unit records of the New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding. Medians and quartile values were estimated by linear interpolation within income intervals.

^a Excludes households paying no cash rent. Households of each size not reporting income were distributed to income intervals according to distribution of households of that size reporting income.

Table D-5

DISTRIBUTION OF RENTER HOUSEHOLDS IN CONTROLLED AND UNCONTROLLED HOUSING,
BY REFERENCE INCOME: NEW YORK CITY, 1968

Reference Income in 1967 Dollars ^a	Controlled Housing		Uncontrolled Housing	
	Thousands of Households ^b	Percentage Distribution	Thousands of Households ^b	Percentage Distribution
Under 1,000	13.7	1.1	1.6	0.3
1,000-1,999	49.8	4.0	7.5	1.2
2,000-2,999	126.1	10.2	22.7	3.8
3,000-3,999	137.2	11.1	32.4	5.4
4,000-4,999	118.1	9.5	33.0	5.5
5,000-5,999	121.4	9.8	34.0	5.7
6,000-6,999	111.1	9.0	40.0	6.7
7,000-7,999	98.5	7.9	43.3	7.2
8,000-8,999	96.1	7.8	41.8	6.9
9,000-9,999	75.8	6.1	46.1	7.7
10,000-10,999	58.6	4.7	37.6	6.3
11,000-11,999	46.7	3.8	35.0	5.8
12,000-12,999	36.6	3.0	29.6	4.9
13,000-13,999	33.9	2.7	34.8	5.8
14,000-14,999	17.4	1.4	22.2	3.7
15,000-19,999	51.0	4.1	66.7	11.1
20,000-24,999	21.2	1.7	34.5	5.7
25,000 or more	25.8	2.1	38.7	6.4
Total	1,238.8	100.0	601.5	100.0
Median income	\$6,478		\$ 9,948	
Interquartile range	5,880		8,023	
Upper limit	9,754		14,486	
Lower limit	3,874		6,463	

SOURCE: Calculations by NYCRI from unit records of the New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding. Medians and quartiles were estimated by linear interpolation within income intervals.

^a For four-person households, incomes as reported; for other households, incomes adjusted by household size to reflect four-person equivalent levels of living. See Ch. III for explanation of reference income concept.

^b Excludes households paying no cash rent, inasmuch as their real incomes are understated by the (unknown) rental value of their apartments.

Table D-6

SELECTED HOUSING CHARACTERISTICS OF TENANTS OF CONTROLLED RENTAL HOUSING,
BY LENGTH OF TENURE: NEW YORK CITY, 1968

Housing Characteristic	Moved in Before 1954		Moved in 1954 or Later	
	Thousands of Households Reporting ^a	Percentage Distribution	Thousands of Households Reporting ^a	Percentage Distribution
All tenants of controlled housing	311.1	100.0	913.1	100.0
<i>Persons per Room</i>				
Under .50	178.7	57.4	344.8	37.8
.51-1.00	121.3	39.0	457.0	50.0
1.01-1.50	8.0	2.6	87.8	9.6
1.51 or more	3.1	1.0	23.5	2.6
Total, all reporting	311.1	100.0	913.1	100.0
<i>Condition of Building</i>				
Sound	239.9	77.3	624.3	68.6
Deteriorating	56.2	18.1	223.9	24.6
Dilapidated	14.4	4.6	61.8	6.8
Total, all reporting	310.5	100.0	910.1	100.0
<i>Gross Rent per Room</i>				
Under \$15	67.3	24.3	86.1	10.4
15-19	49.1	17.7	120.3	14.6
20-29	105.3	38.1	320.8	38.8
30-49	45.7	16.5	228.7	27.7
50 or more	9.5	3.4	70.5	8.5
Total, all reporting	277.0 ^b	100.0	826.4 ^c	100.0

SOURCE: Unpublished tabulations, New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding.

^a Number of households reporting differ for each housing characteristic and do not necessarily equal "all tenants of controlled housing."

^b Excludes 7,000 households reporting "no cash rent."

^c Excludes 20,500 households reporting "no cash rent."

Table D-7

SELECTED HOUSEHOLD CHARACTERISTICS OF TENANTS OF CONTROLLED RENTAL HOUSING,
BY LENGTH OF TENURE: NEW YORK CITY, 1968

Household Characteristic	Moved in Before 1954		Moved in 1954 or Later	
	Thousands of Households Reporting ^a	Percentage Distribution	Thousands of Households Reporting ^a	Percentage Distribution
All tenants of controlled housing	311.1	100.0	913.1	100.0
<i>Size of Household</i>				
1 person	101.7	32.7	245.0	26.8
2 persons	129.0	41.5	270.3	29.6
3 persons	44.7	14.4	151.1	16.5
4 persons	21.1	6.8	122.5	13.4
5 persons	8.8	2.8	69.0	7.6
6 or more persons	5.8	1.8	55.2	6.0
Total, all reporting	311.1	100.0	913.1	100.0
<i>Sex and Age of Head</i>				
Male	172.7	63.4	531.9	68.1
Under 45 years	17.4	6.4	307.3	39.4
45-64 years	85.0	31.2	167.3	21.4
65 years and over	70.2	25.8	57.3	7.3
Female	99.8	36.6	248.8	31.9
Under 45 years	8.6	3.2	122.8	15.7
45-64 years	41.4	15.2	79.2	10.1
65 years and over	49.8	18.3	46.8	6.0
Total, all reporting	272.4	100.0	780.7	100.0
<i>Ethnic Group of Head</i>				
White non-Puerto Rican	267.2	86.7	561.4	62.3
Nonwhite non-Puerto Rican	32.7	10.6	197.0	21.9
Puerto Rican	8.1	2.6	143.2	15.9
Total, all reporting	308.0	100.0	901.6	100.0
<i>Income of Head and Related Persons</i>				
Under \$2,000	36.7	20.6	52.6	9.6
2,000-3,999	37.9	21.3	119.4	21.8
4,000-5,999	31.5	17.7	132.0	24.1
6,000-7,999	27.5	15.4	98.3	17.9
8,000-9,999	15.8	8.9	62.6	11.4
10,000-14,999	18.3	10.3	60.1	11.0
15,000 or more	10.1	5.7	23.8	4.3
Total, all reporting	177.9	100.0	548.9	100.0

SOURCE: Unpublished tabulations, New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding.

^a Number of households reporting differ for each household characteristic and do not necessarily equal "all tenants of controlled housing."

Table D-8
DISTRIBUTION OF CONTROLLED AND UNCONTROLLED RENTAL HOUSING UNITS,
BY GROSS RENT PER UNIT: NEW YORK CITY, 1968

Gross Monthly Rent per Unit, in Dollars	Controlled Housing ^a		Uncontrolled Housing ^a	
	Thousands of Units	Percentage Distribution	Thousands of Units	Percentage Distribution
Under 30	0.8	0.1	0.2	(b)
30-39	9.5	0.8	0.5	0.1
40-49	34.5	3.0	1.4	0.3
50-59	85.1	7.5	3.4	0.6
60-69	137.0	12.1	7.1	1.3
70-79	171.7	15.1	15.1	2.8
80-99	324.5	28.6	52.1	9.7
100-124	206.7	18.2	88.2	16.4
125-149	89.3	7.9	117.5	21.8
150-174	33.6	3.0	100.4	18.7
175-199	16.6	1.5	54.0	10.0
200-224	9.2	0.8	29.0	5.4
225-249	5.6	0.5	16.9	3.1
250-299	5.1	0.5	21.8	4.1
300 or more	5.9	0.5	30.7	5.7
Total reporting gross rent	1,135.2	100.0	538.2	100.0
No cash rent	27.7	—	10.2	—
Gross rent not reported	103.9	—	63.2	—
Total occupied units	1,266.8	—	611.7	—
Median gross rent	\$ 88.00		\$146.50	
Interquartile range	39.70		67.70	
Upper limit	110.70		183.20	
Lower limit	71.00		115.50	

SOURCE: Unpublished tabulations, New York City Housing and Vacancy Survey of 1968.

NOTE: Distributions may not add exactly to totals because of rounding. Medians and quartiles were estimated by linear interpolation within class intervals for units reporting gross rent.

Elsewhere in this volume we have presented gross rent data for all occupied rental housing, which include our case-by-case estimates of gross rents for 162,900 units out of 172,000 whose tenants reported contract but not gross rent. The percentage distributions shown above are almost identical with those we obtained for corresponding sectors of the stock after adding in our estimates of unreported gross rents. Simply as a matter of convenience, we have based this table on available tabulations of the Housing and Vacancy Survey rather than on special tabulations of our modified unit record file.

^a Occupied units only.

^b Less than 0.05.

Table D-9

DISTRIBUTION OF CONTROLLED HOUSING UNITS BY ESTIMATED DIFFERENCE BETWEEN MARKET RENT
AND CONTROLLED RENT, BY TYPE OF STRUCTURE: NEW YORK CITY, 1968

Difference between Market Rent and Controlled Rent, in Dollars	Number of Units by Age and Type of Structure					
	Multiple Dwellings 1930-1946	New-Law Tenements 1901-1929	Old-Law Tenements 1900 or Earlier	Conversions and Class B Structures ^a	One- and Two-Family Houses	All Types
<i>Market rent greater than controlled rent:</i>						
100 or more	85,828	137,423	34,177	4,274	210	261,912
75-99	28,745	63,367	24,433	4,771	1,460	122,776
50-74	14,714	97,726	31,238	7,733	2,290	153,701
25-49	5,420	135,234	29,995	11,480	8,100	190,229
1-24	835	108,718	31,938	16,150	12,990	170,631
<i>Controlled rent equal to or greater than market rent:</i>						
0-24	868	57,840	26,201	17,301	18,340	120,550
25-49	511	17,776	15,498	11,570	8,840	54,195
50-74	314	3,418	9,104	6,001	1,730	20,567
75-99	209	584	3,104	4,210	210	8,317
100 or more	313	1,252	1,689	4,021	520	7,795
Total	137,757	623,338	207,377	87,511	54,690	1,110,673
Median difference	> +\$100	+\$48	+\$38	+\$1	-\$3	+\$48

SOURCE: Analysis by NYCRI of unit records of the New York City Housing and Vacancy Survey of 1968.

NOTE: Medians calculated by linear interpolation within rent-difference groups.

^a "Conversions" are one- and two-family houses converted to apartments; Class B structures are transient accommodations.

Table D-10

DISTRIBUTION OF CONTROLLED HOUSING UNITS BY ESTIMATED DIFFERENCE BETWEEN
MARKET RENT AND CONTROLLED RENT, BY BOROUGH: NEW YORK CITY, 1968

Difference between Market Rent and Controlled Rent, in Dollars	Number of Units by Borough					
	Manhattan	Queens	Brooklyn	Bronx	Richmond	All NYC
<i>Market rent greater than controlled rent:</i>						
100 or more	172,319	27,841	26,348	35,394	0	261,902
75-99	46,724	19,294	31,449	25,089	210	122,766
50-74	40,553	21,567	50,586	40,881	104	153,691
25-49	30,429	21,396	77,595	59,871	938	190,229
1-24	21,807	19,275	74,274	54,883	382	170,621
<i>Controlled rent equal to or greater than market rent:</i>						
0-24	15,753	14,128	54,194	35,670	785	120,530
25-49	8,732	6,356	24,470	14,527	100	54,185
50-74	4,794	1,671	10,391	3,292	419	20,567
75-99	2,337	168	4,499	1,313	0	8,317
100 or more	2,562	0	3,982	1,251	0	7,795
Total	346,010	131,696	357,788	272,171	2,938	1,110,603 ^a
Median difference	+\$100	+\$53	+\$27	+\$36	+\$11	+\$48

SOURCE: Analysis by NYCRI of unit records of the New York City Housing and Vacancy Survey 1968.

NOTE: Medians calculated by linear interpolation within rent-difference groups.

^a Total number of units is 70 less than total in Table D-9 due to rounding in calculation of differences for one- and two-family houses.

Table D-11

MARKET RENTAL VALUE OF HOUSING UNITS IN MULTIPLE DWELLINGS AS A
FUNCTION OF PHYSICAL CHARACTERISTICS: NEW YORK CITY, 1968

Characteristic of Unit or Structure	Amount Added to Gross Monthly Rent
All units	\$ -4.05 ^a
<i>Location of building:</i>	
Bronx	9.27 ^b
Brooklyn	12.83
Manhattan	109.41
Queens	23.14
Richmond	0.00
<i>Type of structure and year built:</i>	
Multiple dwelling, 1960-1968	41.89
Multiple dwelling, 1947-1959	21.91
Multiple dwelling, 1930-1946	97.07
New-Law tenement, 1901-1929	21.28
Old-Law tenement, 1900 or earlier	-29.05
1-2 family house converted to apartments ^c	0.00
<i>Number of rooms and furnishings:</i>	
Per room, unfurnished	41.87
Per room, furnished	48.54
<i>Condition of structure:</i>	
Sound	23.08
Deteriorating or dilapidated	0.00
<i>Number of units in structure:</i>	
1-9 units	-45.44
10-19 units	-29.24
20-49 units	-6.12 ^b
50-99 units	-7.87
100 units or more	0.00
<i>Number of stories in structure:</i>	
Per story, 1-6 stories	-8.86
7 or more stories	-51.18
<i>Story of unit and presence of elevator:</i>	
Per story, 1-6 stories, no elevator	-10.69
Per story, 1-6 stories, with elevator	1.71
7th or higher story (with elevator)	26.50

SOURCE: Analysis by NYCRI of unit records of the New York City Housing and Vacancy Survey of 1968.

NOTE: Entries are least-squares regression coefficients.

^a Regression intercept.

^b Not significantly different from zero at the .95 level of confidence.

^c Includes a few miscellaneous Class B (transient dwellings).

Table D-12

MARKET RENTAL VALUE OF HOUSING UNITS IN ONE- AND TWO-FAMILY
STRUCTURES AS A FUNCTION OF PHYSICAL CHARACTERISTICS:
NEW YORK CITY, 1968

Characteristic of Unit or Structure	Amount Added to Gross Monthly Rent
All units	\$ 33.68 ^a
<i>Location of building:</i>	
Bronx	7.71
Brooklyn	13.39
Manhattan	153.22
Queens	18.79
Richmond	0.00
<i>Year built:</i>	
1960-1968	39.39
1947-1959	28.37
1946 or before	0.00
<i>Number of rooms and furnishings:</i>	
Per room, unfurnished	14.74
Per room, furnished	15.52 ^b
<i>Condition of structure:</i>	
Sound	6.16
Deteriorating or dilapidated	0.00
<i>Residence of owner:</i>	
Owner in structure	-6.31
Owner not in structure	0.00

SOURCE: Analysis by NYCRI of unit records of the New York City Housing and Vacancy Survey of 1968.

NOTE: Entries are least-squares regression coefficients. All are significantly different from zero at the .95 level of confidence except for "furnishings."

^a Regression intercept.

^b Not significantly different from "unfurnished."

Table D-13

COMPARISON OF HYPOTHETICAL AND ACTUAL RENTS PAID BY TENANTS OF
CONTROLLED RENTAL HOUSING, BY INCOME OF TENANT:
NEW YORK CITY, 1968

Annual Income, in Dollars	Gross Monthly Rent (weighted mean)			Difference as Percent of Reported Rent
	Hypothetical	Reported	Difference	
Under 1,000	\$109	\$ 68	\$ 40	58.8
1,000-1,999	112	75	36	48.5
2,000-2,999	118	82	36	44.5
3,000-3,999	121	84	37	44.2
4,000-4,999	128	87	41	47.5
5,000-5,999	136	89	47	53.1
6,000-6,999	143	95	48	50.1
7,000-7,999	150	99	50	50.7
8,000-8,999	157	103	54	52.3
9,000-9,999	161	100	61	61.3
10,000-10,999	176	116	60	52.3
11,000-11,999	182	111	71	64.6
12,000-12,999	195	121	75	62.0
13,000-13,999	185	112	73	64.5
14,000-14,999	204	111	93	83.7
15,000-19,999	237	136	102	75.1
20,000-24,999	305	147	158	107.4
25,000 or more	500	217	283	130.5
All households	146	94	52	54.9

SOURCE: Analysis by NYCRI of unit records of the New York City Housing and Vacancy Survey of 1968.

NOTE: Based on sample of 6,479 households paying cash rent for controlled housing units. Differences and percentages were computed before rounding.

Appendix E

SUPPLEMENTARY DATA ON RENT-PAYING ABILITY AND HOUSING COSTS

STANDARDS GOVERNING HOUSING ASSISTANCE PROGRAMS IN 1969

Table E-1 summarizes the income limits for admission to each of eleven programs of housing assistance that were active in New York City in 1969. It also shows the explicit or implicit *minimum* rent/income ratios permitted by each program. An abbreviated version of these standards is presented in Ch. VI, Table 25; here, we show additional detail and add qualifications.

We have tried to organize and interpret the rules of each program in a way that facilitates interprogram comparisons of actual income limits and minimum tenant contributions. This was not easy, for several reasons. Enabling legislation for these programs usually sets broad guidelines for tenant eligibility; the details are filled in by administrative regulations. Since these regulations are complicated and often less than rigorous, their practical effects are sometimes obscure. In several cases, the regulations do not set a unique program-wide income limit; instead the limit for a particular applicant depends on the current rent of the apartment for which he applies. In calculating income limits, most of the programs permit exclusions or deductions from income whose value varies with family composition or other circumstances.

For each program listed, the table first summarizes the statutory provisions concerning tenant incomes in such a way as to show the scope left for administrative interpretation. In the second column, we show income limits actually in effect in 1969. Minima are rigorously defined in only two cases; maxima usually vary with family size. The dollar amounts shown are net of all exclusions and deductions from gross income that are allowed by law or regulation; these adjustments are detailed in the third column.¹

¹ The reader may note that the income limits shown in Table 25 for admission to these same housing assistance programs often differ from those shown in the second column of Table E-1. This is because the limits shown in Table 25 are expressed in terms of *gross income* rather than *adjusted gross income*. In other words, in Table 25 we took account of the deductions and exclusions shown in Column 4 of Table E-1 as these would apply to a husband-wife family with one earner and minor children as indicated.

For those programs in which maximum incomes are set for each applicant as a multiple of the scheduled rent of his apartment, we show a dollar income limit for each size of household. Each such limit is based on the program-wide average rent for apartments with the number of rooms usually permitted for families of the indicated size. We should note, however, that such space standards are not rigidly adhered to by program managers; for this reason, as well as because rents for a given size of apartment vary within and between projects, the dollar limits shown are characteristic rather than absolute.

Unlike the other housing assistance programs listed, the welfare program provides rent assistance as an element of general income maintenance. The "income limit for admission" is, in effect, the subsistence budget computed by the caseworker for each applicant; the Department of Social Services provides the applicant with the difference between the cost of his budget and his income from other sources. The rent component of the subsistence budget is the actual contract rent of the apartment occupied by the client, subject to administrative ceilings. The figures we show as income limits for each size of family are not really limits but the upper quartile of subsistence budgets for clients receiving aid in mid-1969.

The last column of Table E-1 shows the *minimum* rent/income ratios for participants in each program. These are set explicitly by statute for limited profit housing companies, the Federal interest-rate subsidy (Sec. 236) and rent supplements programs, and the State and City public housing programs. For limited dividend and private redevelopment housing companies and for the State low-rent assistance program, explicit minima are set by administrative regulation. For the Federal interest rate subsidy program (Sec. 221(d)(3)BMIR) and the Federal public housing program, there are no firm minima, but the schedules of rents and income limits imply the approximate minima shown in the table. In the welfare program, there are no official rent/income standards.

We should also point out that most of these housing assistance programs permit those accepted as tenants to continue in occupancy even though their incomes rise above admission limits. In some but not all cases, rents are increased when incomes go up. We have not attempted to work out the implications of these adjustments for rent/income ratios.

The data for Table E-1 were assembled from too many sources to document with precision. Typically, we checked the enabling legislation, then asked program administrators for further data. In some cases, they were able to supply supporting documents; in others, they gave us the necessary information by telephone. The most frequently consulted documents were the following:

U.S. House of Representatives, 90th Congress, 2d Session, Committee on Banking and Currency, *Basic Laws and Authorities on Housing and Urban Development Revised through January 15, 1968*, U.S. Government Printing Office, Washington, D.C., 1968.

President's Committee on Urban Housing, *A Decent Home*, U.S. Government Printing Office, Washington, D.C., 1969, Section II, "Federal Housing Programs."

New York City Department of Development, Office of Housing Sponsorship and FHA Programs, *A Description of Federally Subsidized Housing Programs*, 1969.

New York City Housing Authority, *1969 Guide to Housing Developments* (pamphlet).

MINIMUM HOUSING STANDARDS: SPACE, EQUIPMENT, QUALITY, AND COMMUNITY FACILITIES

The most compelling argument for public intervention in a housing market is the likelihood that, without such intervention, some members of the community will either freely choose or be forced by circumstance to live in housing that threatens the health, safety, or welfare of the actual tenants or of their neighbors.

In the United States, the earliest concern seems to have been more for the neighbors than for the actual tenants of a dangerous dwelling. Municipal housing regulation first took the form of construction standards intended to reduce fire hazards and sanitary standards intended to reduce the spread of infectious diseases. Such standards were and still are weak or lacking in rural areas, where individual dwellings are widely separated so that fire and health hazards do not spread from dwelling to dwelling.

Toward the end of the nineteenth century, reformers in most of the nation's burgeoning cities became more directly concerned with the effects of low-quality housing on the health, safety, and welfare of its tenants. By public regulation of design and construction methods, they sought to protect renters and buyers from dangers not readily apparent to the uneducated eye. They also sought to protect poor tenants from even readily visible dangers by preventing the marketing of substandard or badly maintained housing. A point not well understood or acknowledged by these reformers was that the cost of the housing improvements required by such public regulations would in the long run be passed on to the tenants, so that the housing standards of the poor were being raised at their own expense.

In New York City, the nineteenth century reform movement culminated in the Tenement House Act of 1901, regulating the design and conditions of occupancy for multiple dwellings. It sought to provide what were then regarded as the most basic conditions for the health and safety of the occupants.

Since then, public regulation of housing standards has grown by a steady process of accretion, interrupted by occasional recodification. New York City's Building Code now governs all new construction and alterations with respect to design, building materials, construction methods, and plumbing, electrical, heating, and elevator systems; it also provides for periodic inspections of certain safety features. The Housing Maintenance Code of 1967 regulates all classes of dwellings in some manner; for rental and multiple dwellings, it provides very detailed regulation of the characteristics of rooms used for living space, setting standards for density of occupancy, lighting and ventilation, heating and plumbing facilities, fire safety,

security from intruders, structural and cosmetic maintenance of apartments and public areas, sanitation, and services provided to tenants. It also requires that all parts of a building be kept in good repair, including those elements of structure and equipment not specifically covered by the code.

The current building and housing codes thus provide the most authoritative statement of the public interest in housing standards in New York City. It is by no means a scientific statement in the sense that each provision of these codes can be shown to ameliorate some specific medical or social problem. Indeed, demonstrable connections between housing conditions and health or housing conditions and social pathology are rare and weak, despite a substantial number of clinical studies by physicians, sociologists, and social psychologists.²

During the 1930s, the American Public Health Association sought to translate existing scientific knowledge into housing principles and specific requirements for "physical, mental, and social health, essential in low-rent as well as high-cost housing, on the farm as well as in the city dwelling." It is indicative of the lack of progress in the scientific approach to housing standards that the second edition of the Association's *Basic Principles of Healthful Housing*, published in 1939, was reprinted as late as 1954 and has not been superseded.³

This document is the principal source from which the Community Council of Greater New York derived housing standards for its low-to-moderate level of living, shown in Table E-2. The Council's standards incorporate the provisions of the City's Multiple Dwelling Law and Sanitary Code (now the Housing Maintenance Code) concerned with structural soundness and fire safety, and specify other health and safety requirements that are also covered by the code. In its provisions for basic equipment and facilities, the Council's standards exceed the City code in several respects; for example, by requiring an oven and refrigerator as part of kitchen facilities, and laundry facilities on the premises. The City code has no "community facilities" requirements.

The most important difference relates to space requirements. The City code only requires 80 square feet of floor space for each person over 4 years of age, excluding halls, foyers, and bathrooms. This is roughly equivalent to one room (9 x 9 feet) per person.⁴ The Community Council specifies a pattern of bedroom occupancy which has more to do with requirements for privacy than requirements for health, and requires a separate living room for all except single persons. Its more detailed space standard for a "normal" family consisting of husband, wife, and minor children (see Ch. VI, Table 29) works out to one room plus one room per person

² For reviews of the literature on housing standards and their relationship to health and welfare, see Nathan Glazer, "Housing Policy and the Family," *Journal of Marriage and the Family*, Vol. XXIX, No. 1, February 1967; and Alvin L. Schorr, *Slums and Social Insecurity*, Washington, D.C., U.S. Government Printing Office, 1963. The best recent experimental work is reported in Daniel M. Wilner, et al., *The Housing Environment and Family Life*; Baltimore, Johns Hopkins Press, 1962.

³ Committee on the Hygiene of Housing, American Public Health Association, Inc., *Basic Principles of Healthful Housing*, Second Edition, New York, 1939, 1950, 1954. The quotation is from p. 4.

⁴ New York City Housing Maintenance Code (amended to 9 December 1968), Article 33, Section D26-33.03. One child under 4 is allowed for every two legal occupants (i.e., for every 160 square feet), except that a single adult with a child under 4 may legally occupy an apartment of 80 square feet.

for families no larger than four persons, and one room per person for families of five or six persons. (The count excludes bathrooms, hallways, closets, etc., and treats kitchenettes and dinettes as half-rooms.)

These space requirements are by far the most troublesome of the Community Council's standards. The concept of privacy on which they are based is easy to dispute; moreover, the smallest possible variation—i.e., one room—makes a significant difference in housing costs, especially for the smaller households.

While the Council's standards are stated clearly enough so that they could be used by a field worker to determine the adequacy of an occupied dwelling unit, it is not easy to use them in connection with available statistical data on housing conditions and housing costs in New York City. The only general sources which record both household and housing characteristics are the decennial Censuses of Housing and the 1965 and 1968 Housing and Vacancy Surveys. From unit records of the 1968 Housing and Vacancy Survey, we can compare person and room counts, and test for the presence or absence of plumbing, heating, and cooking equipment. The relationship between the Council's standards for structural soundness, safety, and sanitation and the Bureau of the Census's categories of structural condition (sound, deteriorating, and dilapidated) is ambiguous; indeed, the Bureau's categories themselves have proven to be ambiguous, since the same building was often rated differently by different enumerators. The 1970 Census of Housing, which relies on self-enumeration by occupants rather than visits by Census enumerators, includes no questions on building condition.

In Ch. VI, we assumed that an apartment would meet the Community Council's standards if it was in a sound structure originally designed for multifamily occupancy and had a kitchen or cooking equipment (even if only a hotplate), a private bath and toilet, and piped hot and cold water.

ESTIMATING THE FULL COSTS OF A LOW-TO-MODERATE HOUSING STANDARD

As explained in Ch. VI, the Community Council's rent allowances for a low-to-moderate housing standard were based on the actual contract rents for unfurnished apartments, almost all of which were rent controlled, to which was added an allowance for tenant-paid utilities. We found that the Council's allowances were a reasonably accurate reflection of median gross rents in 1968 for fully equipped apartments in sound rent-controlled buildings. However, we expressed doubts whether these controlled rents were adequate to cover the full costs of supplying such housing, including a competitive rate of return to the investor.

Cost Data for Rent-Controlled Housing

To test this proposition, we drew a sample of rent-controlled buildings whose owners applied to the Office of Rent Control for "hardship" rent increases in 1966

and 1967. In order to obtain higher ceiling rents, an applicant was required to document his maintenance and operating expenditures for a recent 12-month period and show the amount of his real estate taxes, the assessed value of the property, and its purchase price if recently acquired. Applications were rejected if a special City inspection of the property revealed violations of the housing maintenance code, or if the records of the Office of Rent Control showed unresolved tenant complaints about decreased building services or related matters.

We eliminated from our sample all buildings whose annual payroll expenses averaged more than \$200 per unit, an amount indicating that they provided higher levels of tenant services (doormen, elevator operators) than seemed appropriate for a low-to-moderate standard of housing. We also eliminated all buildings with commercial uses on the premises. The physical and financial characteristics of the remaining 311 buildings are summarized in Table E-3, with detail by borough of location shown in Table E-4.⁵

This sample of buildings seems to be a reasonable representation of the kinds of housing embraced by the Community Council's standards. All but one of the buildings were constructed before 1942, with eight predating 1900; the mean year of construction is 1928. The buildings range in size from 2 to 550 units, with a mean of 56 units; about 70 percent have elevators. Apartment sizes usually vary within buildings; our data show only the average apartment size for each building, ranging from 1.7 to 6.7 with a mean of 3.5. About 20 percent of the buildings were located in Manhattan, 15 percent in Queens, 29 percent in Brooklyn, and 36 percent in the Bronx. In each borough, the mean annual contract rent at the time of application was about \$1,000 per unit; overall, about two-thirds of the buildings reported average annual contract rents between \$827 and \$1,237. Making an appropriate allowance for the tenant-paid utilities, we estimate that the gross rent of the average 3.5-room apartment in our sample would be \$1,160. As shown in Ch. VI, Table 30, the median gross rent of "sound" controlled apartments in 1968 was \$1,068 for three rooms and \$1,128 for four rooms. The Community Council's gross rent allowance was \$1,032 for three rooms and \$1,212 for four rooms.

⁵ The applications in our final sample of 311 buildings were filed in 1965, 1966, and 1967, in roughly equal proportions. Real estate taxes and assessed values were those for the fiscal year during which application was made. Other expenses are documented for a "test year" whose terminal dates distribute as follows:

1964.....	24%	1966.....	34%
1965.....	35%	1967.....	7%

Apparently, however, expense documentation was often updated between the date of original application and final action by the Office of Rent Control, and such changes were not always reflected in the recorded terminal date of the "test year." In our judgment, the expense data described below generally reflect cost conditions for the 3-year period 1965-1967.

We shall be comparing these data with Community Council budgets based on prices current in October 1967, and with rents reported by the Housing and Vacancy Survey conducted between 15 April and 15 June 1968. Given the general pattern of inflation during these years, average costs reported in our hardship sample would certainly tend to be lower than those prevailing in early 1968, perhaps by as much as 10 percent.

Components of Housing Costs

The full cost of supplying rental housing can be conveniently divided into three major categories: maintenance and operating costs, real estate taxes, and competitive return on capital. Here, we present a brief discussion of each, and explain how we estimated allowances for these costs in the typical case, a 3.5-room apartment in a medium-sized building of average age. These allowances are shown in the last line of Table 34. (The next subsection will explain our procedures for allocating costs to larger and smaller apartments.)

1. *Maintenance and Operating (M&O) Costs.* These are current outlays required to manage and maintain the property and to provide the tenant services registered with the Office of Rent Control. "Hardship" applicants were required to provide separate documentation of the component expenses as listed at the bottoms of Tables E-3 and E-4. They include an allowance for minor capital items ("replacements and improvements") amortized over their useful lives.

The hardship formula also includes a depreciation allowance equal to 2 percent of building value, over and above documented expenses for repairs, maintenance, and replacements. Theoretically, a depreciation allowance is intended to allow the owner to accumulate, out of operating revenues, a sinking fund for repairs and replacements. Since not only these items but "improvements" have already been entered as expenses, there is clearly considerable double-counting in a separate depreciation allowance. We have therefore omitted this allowance from our estimate of standard M&O expenses.

In principle, "good-as-new" maintenance would more or less continuously offset real capital consumption, obviating the need for a depreciation allowance or sinking fund. As a building ages, one would expect the cost of good-as-new maintenance to rise. The annual increase in M&O costs with building age is, under these conditions, the measure of *real* depreciation.⁶

We do not suppose that good-as-new maintenance is practiced on our sample of buildings, but these buildings *were* required to be free of housing code violations at the time of application. And we can show that the owners of the older buildings in the sample spent more on M&O per unit than the owners of the newer buildings, just as we would expect from the theory of depreciation. So we conclude that by omitting the depreciation allowance, we are only slightly underestimating true expenses.

As the reader can see from Table E-3, the average building reported M&O expenses of \$426 per unit. In Table 34 (Ch. VI), we have rounded this figure to \$425.

2. *Real Estate Taxes.* These are imposed by the City as a condition of ownership and are in principle based on the market values of land and improvements, expressed as assessed values by the City's Real Property Assessment Department. The tax rate on assessed value is set each fiscal year by the Board of Estimate.

⁶ In a study of M&O expenses in Federal public housing projects in New York City (which do have a good-as-new maintenance policy), C. Peter Rydell has shown that the real depreciation rate for a new building is about 3.0 percent in the first year, declining to 0.5 percent after 10 years and 0.3 percent after 30 years. See his *Factors Affecting Maintenance and Operating Costs in Federal Public Housing Projects*, R-634-NYC, The New York City-Rand Institute, 1970, Sec. VI.

In practice, assessed values are typically well below market values, the relationship varying somewhat by borough. We were able to test this relationship for 145 buildings in our sample that had changed hands between 1958 and 1967, for which audited purchase prices were included in the hardship applications. Overall, purchase prices for these properties averaged 147 percent of assessed value at the time of purchase. When the buildings are grouped by location, the averages range from 139 percent in the Bronx to 154 percent in Queens; but the number of buildings in individual boroughs is too small to allow any robust conclusions about inter-borough variations in assessment practices.

We found, however, that for the sample as a whole, the simple linear correlation between purchase price and assessed value at the time of acquisition was .955 ($r^2 = .912$). Another indicator of market value often used by real estate operators is the rent roll. For all 311 buildings, the simple linear correlation between assessed value at the date of hardship application and the reported rent roll was .984 ($r^2 = .968$). On the whole, it seems clear that assessments for multiple dwellings in New York City, while well below market value, bear a consistent relationship to it. This fact is of some importance for determining an appropriate allowance for return on capital, as we shall see shortly.

For present purposes, we need only note that the average tax liability per unit in our sample of buildings amounted to \$253.⁷ This is the allowance we show in Table 34 (rounded to \$255) for the average unit of 3.5 rooms.

3. *Competitive Return on Capital.* In order to motivate a real estate investor to maintain his building as a long-term investment rather than to "milk" it by undermaintenance, net operating income—the income from the building after deducting M&O expenses and real estate taxes—must be large enough to pay interest on borrowed capital and still leave some "profit" or return on equity.

For someone contemplating the purchase of a building, it is easy to compute both the *amount* of this return and its *rate*. He knows how much he must pay to acquire title, and how much of the purchase price he can borrow on the property at what rate of interest. Consequently, he knows how much equity capital he must supply. The expected *amount* of his return is simply expected net operating income less interest payments. The expected *rate* of return on equity is this amount divided by the amount of capital he supplies. He can compare this rate of return with yields available from alternative investments, and decide whether it is to his advantage to acquire the property.

For someone who already owns such a property, the calculation is less clear. While his mortgage obligations are well defined, the value of his equity—the base on which the rate of return is computed—is not necessarily the amount of his original contribution, or even that contribution plus any subsequent additions he has made to equity through improvements or through amortization of his mortgage. Rather, the value of his equity is determined by dividing the *amount it actually*

⁷ Since the average assessed value was \$5,206, the implied average tax rate was 4.86 percent of assessed value. The official tax rates were 4.41 percent in Fiscal 1965, 4.50 percent in Fiscal 1966, 4.96 percent in 1967, and 5.07 percent in Fiscal 1968. These fiscal years embrace the "test years" for which our buildings documented their expenses, with Fiscal 1967 accounting for nearly half the cases.

earns by the market rate of interest on investments of comparable risk.⁸ This is the same as saying that his equity is worth what he could sell it for to another party seeking the best available return on his capital.

The distinctions made in the two preceding paragraphs are necessary to the reader's understanding of an apparent circularity in fixing the allowance for return on capital in our estimates of the full costs of supplying rental housing. One *could* argue that an investor always obtains a market rate of return on his equity, since the value of the equity goes up or down according to the amount of return actually received. Here, we argue that whatever the current market value of the property, the net operating income must be at least large enough to maintain that value in the future; otherwise, the owner is faced with the prospect of a capital loss, to which he is likely to respond by withdrawing his equity in the only ways he can—through undermaintenance or nonpayment of real estate taxes. If most of the capital has been supplied by the mortgagor, the owner may even be able to recapture his entire equity before his tenants move out or the City steps in; eventually, the mortgagor is left holding the bag.

The assessed values of our 311 buildings when their owners applied for hardship rent increases provide our best clue to their market values. As we have seen, the average relationship on the 145 buildings for which both earlier purchase prices and assessed values were available was:

$$\text{Market value} = 1.47 \text{ assessed value.}$$

For the average building, assessed value per unit was \$5,206, so the corresponding market value should be about \$7,650. (There is some evidence, however, that the ratio of market value to assessed value has been rising over time; if so, our average market value for 1965-1967 may be low, since our multiplier of 1.47 is based on transactions data over the whole period, 1958 to 1967.)

The next question is, How large a net return was needed in 1965-1967 to sustain this market value? The hardship applications reported only the maximum rental income obtainable from each building, assuming no vacancies or collection losses. Even on this basis, the average net operating income of our 311 hardship applicants in the year preceding application was \$358 per unit, less than 4.7 percent on a market value of \$7,650. Under the "6 + 2" hardship formula,⁹ applicants could anticipate allowable rent increases that would increase their maximum yields to something between 5.5 and 7.5 percent of market value, depending on when the building had been purchased, on the ratio of land value to building value, and on the vagaries of assessment practices. The rent increases actually granted to build-

⁸ More generally, the present value of an asset is equal to the sum of the net operating income accruing to the asset-holder over time, each installment discounted at the current rate of interest. For simplicity, the text assumes a level flow of net operating revenue over time.

⁹ The hardship formula allowed a return of 6 percent on the value of the entire property plus a 2 percent "depreciation allowance" on the value of the building. If the property had been recently—but not too recently—acquired, documented purchase price was acceptable as a value basis; otherwise, current assessed value was used.

ings in our sample brought the average yield to 5.8 percent, again assuming full occupancy and no collection losses.

In 1966 and 1967, interest rates on both conventional mortgages and Baa corporate bonds in the United States fluctuated between 6.00 and 6.75 percent, with a rising trend. Certainly no one contemplating a real estate investment in New York City would accept a lesser overall rate of return; the equity holder would seek more, to compensate for his risk.

How much more is a question to which there is no unique answer. Real estate investors differ considerably in their investment objectives, willingness to take risks, appraisal of the future, access to equity capital, and income tax bracket. To some, the form of the yield—whether current cash flow or an increase in equity through mortgage amortization—may be as important as its amount. Those with high taxable incomes especially stand to benefit from nontaxable depreciation allowances. Those with abundant working capital may be attracted by distant prospects of capital gain on the site. Those willing to risk a negative cash flow if revenues drop can mortgage heavily so that their small equity has a high “leverage.”

We would thus expect to find a fairly wide range of acceptable rates of return on equity coexisting in the market. The corresponding range of acceptable overall yield would, however, be smaller, since the terms of mortgage financing are less variable. In our judgment, a net operating income in 1966-1967 equal to 8 percent of market value could have been juggled by most investors to provide an acceptable return on equity. Assuming that mortgage financing was available at 6.5 percent, the implied returns on equity over the common range of leverage positions are shown in the table below; the calculations are based on our typical “hardship” building of 56 units, with a market value of \$430,000.

Percent of Market Value		Net Operating Income ^a	Interest Payments	Return on Equity	
Mortgage	Equity			Amount	Percent
50	50	\$34,400	\$13,975	\$20,425	9.50
60	40	34,400	16,770	17,630	10.25
70	30	34,400	19,565	14,835	11.50
80	20	34,400	22,360	12,040	14.00

^a Eight percent of \$430,000.

These returns on equity range from 9.5 percent for an owner who supplies half the capital to 14.0 percent for one who supplies only a fifth of the capital. But the latter, with high fixed interest payments, is especially exposed to risks from the fluctuations in net operating income due to vacancies, collection losses, or unexpected expenses; a drop of only 10 percent in the rental revenue of \$72,498 needed to produce the above returns for our average building (see Table 34) reduces his

share of net operating income to \$4,790, a return of 5.57 percent on his equity of \$86,000. A drop in rental revenue of 20 percent would not only wipe out his return but force him to draw on other resources to meet interest payments on the mortgage; and since most mortgages provide for repayment of principal along with interest payments, the point of negative cash flow to the high-leverage owner would be reached much sooner than these figures indicate.

In Table 34, we allow a net operating income covering an 8-percent return on capital, without specifying its division between the mortgage holder and the building owner. This amounts to \$612 for the typical 3.5-room unit with a market value of \$7,650.

Variations in Costs with Size of Unit

Above, we explained how we arrived at our estimate of the full cost of supplying a typical apartment of 3.5 rooms in a typical building of 56 units, built in 1928. The final step is to estimate these costs for larger and smaller units.

It is quite customary in real estate circles and among housing analysts to discuss both costs and rental incomes in terms of *cost or rent per room*, i.e., the total cost (income) of a building divided by the total number of rooms in the building. Since buildings vary both in numbers of units and in average size of unit, and apartments within a building usually vary in size, this way of expressing costs and incomes makes it easier to compare the finances of different buildings.

However, no landlord sets rents on individual apartments by so simple a rule. If not constrained by rent control, he tries to vary rents within his building in a pattern that accords with consumer preferences for apartments of different sizes and for advantages of exposure, height above street level, etc. At the same time, he has a target for total building income, which must cover full costs as defined above.

Although few of these costs can be unequivocally assigned to individual units within a building, the collective experience of landlords should teach them which units pay their own way and which have to be "carried" by the rest of the building. Our job is to allocate these costs from limited information; one check on the result is the pattern of market-set rents on uncontrolled apartments of various sizes.

The key to our allocation procedure is statistical evidence of the variation in M&O expenses with average apartment size after controlling for the effects of other building characteristics such as number of units, type of structure, and age of building. Our analysis showed that, in our 311-building sample, annual M&O expenses increased by a bit less than \$50 per unit with each additional room per unit. Taking the average M&O expense in our sample (\$426 for 3.5 rooms) as a base, we estimated expenses for larger and smaller apartments as shown in the table below.

Note that the basic expense for two rooms is quite large relative to the marginal expense of each additional room. This pattern seems entirely credible to us. The basic two-room unit meeting our standard must include a bathroom (not counted as a room) and at least a kitchenette. These rooms contain expensive equipment that is notoriously vulnerable to breakdown or malfunction. Additional rooms

<i>Number of Rooms</i>	<i>M&O Expenses per Unit</i>
2	349
3	399
4	449
5	498
6	548

are essentially empty boxes, wired for electricity and heated by radiators or furnace vents, neither of which requires as much attention as plumbing and cooking equipment. Moreover, the cost of many tenant services—maintaining hallways and lobbies, trash collection, recordkeeping and billing—does not increase with apartment size.

A similar analysis of real estate tax payments reported by our 311 buildings indicated that tax liabilities per unit also varied with number of rooms per unit, each additional room adding about \$16 to real estate taxes. However, we also found that buildings with elevators typically pay higher taxes—about \$60 more per unit—than walkups when other variables are controlled. Based on this evidence, we estimated typical tax liabilities for apartments of two to six rooms separately for elevator buildings and walkups as shown in the table below; the final column is a weighted average reflecting the relative frequency of the two kinds of structures in our sample (about 70 percent of the 311 buildings had elevators).

Number of Rooms	Real Estate Taxes per Unit		
	Elevator	Walkup	Weighted Average ^a
2	\$246	\$185	\$228
3	262	201	244
4	278	217	260
5	294	233	275
6	310	249	291

^a Values for elevator and walkup buildings are weighted in proportion to the occurrence of each in the sample. See Table E-3.

As with M&O expenses, we find that real estate taxes on two-room apartments are high relative to the marginal tax on each additional room. This is true for both elevator buildings and walkups.

Since real estate taxes are a fixed percentage of assessed value, and our allowance for net return on capital is also a fixed percentage of assessed value, both

should vary with apartment size in the same way. We can compute the appropriate net return allowance for each size of apartment by computing the ratio of the average allowance (\$612) to the average tax liability (\$253), and multiplying each entry in the table above by this ratio (2.419). We have done this, producing the table below:

Number of Rooms	Return on Capital per Unit		
	Elevator	Walkup	Weighted Average ^a
2	\$595	\$448	\$552
3	634	486	590
4	672	525	629
5	711	564	665
6	750	602	704

^a Values for elevator and walkup buildings are weighted in proportion to the occurrence of each in the sample. See Table E-3.

The estimates derived in the preceding pages for each of the three components of total cost are summarized in Table E-5 for apartments of two to six rooms. For each size of apartment, the table also shows the percentage share of each component in the total. M&O expenses rise from 30.9 percent of total cost for two rooms to 35.5 percent for six rooms; over the same range, real estate taxes fall from 20.2 to 18.9 percent and net return falls from 48.9 to 45.6 percent.

This result illustrates a conceptual difficulty with this method of allocating costs, a difficulty whose practical consequence is overestimation of total costs for small apartments and underestimation for large apartments.

Our allowances for real estate taxes and net return on capital are both linear transformations of assessed value. As we have seen, assessed values of the buildings in our sample are in turn a linear transformation of their rent rolls ($r^2 = .968$). So our scheduled tax and net return allowances for apartments of different sizes reflect the relative rents of these apartments as they have evolved under rent control, not as they would be if rents reflected full costs.

Quantitatively, the "new lease" provision has been the most important source of rent increases under the rent control law, accounting for more than half of the dollar value of increases granted in every year since 1962. Rents on controlled apartments with frequent turnover of tenants have gone up faster than rents on apartments with few moveouts. Because small apartments turn over more frequently than large ones, their rents have risen disproportionately. This shift in relative rents has come to be reflected in a corresponding skew in assessed values.

Since our purpose is to estimate the rents needed to cover full costs, we should not be bound by this circumstance. Instead, we should seek a pattern of

typical costs by apartment size such that tax liability and net return are each a constant percentage of total cost (= rental income) over the range of apartment sizes. This result can be obtained only if real estate taxes and net return are allocated in the same pattern as M&O expenses.

Table E-6 shows this pattern. We obtained the schedule of real estate taxes shown there by the following method: We first computed the ratio of average real estate taxes to average M&O expenses in our 311-building sample ($\$253/\$426 = .594$). We then multiplied each entry in the M&O schedule by this ratio to get the corresponding entry for the tax schedule. A similar procedure was followed for the schedule of return on capital, where the ratio was ($\$612/\$426 = 1.437$).

Comparing Tables E-5 and E-6, the reader can see that the second method yields estimates of typical cost per unit that are slightly lower for two- and three-room units than those computed by the first method, and slightly higher for units of four, five, and six rooms. The largest difference, for six rooms, amounts to \$118 per year, equivalent to a difference of less than \$10 in monthly contract rent. Given the approximate nature of the calculation to begin with, such a difference is almost a quibble. But because the data in Table E-6 are internally consistent, we have used them as the basis for our discussion of typical full costs in Ch. VI. These data, rounded to the nearest \$5, are shown in Table 34.

Typical Full Costs Compared with Controlled and Market Rents

To gain perspective on the schedule of typical full costs shown in Table E-6, comparisons with actual rents are helpful. As we have explained, that schedule is based on data for violation-free rent-controlled buildings whose owners were granted hardship rent increases in 1966 and 1967. By excluding those whose payrolls exceeded \$200 per unit, we believe that we have constructed a sample of buildings, scattered through Manhattan, Queens, Brooklyn, and the Bronx, that conforms generally to the Community Council's definition of adequate housing for a low-to-moderate level of living. Our typical building is a 56-unit New-Law tenement, built in 1928, with seven-tenths of an elevator (if that is conceivable). Our data indicate that costs for apartments in smaller or larger buildings would not differ greatly; older buildings would have higher M&O costs, but these would be more than offset by lower taxes and return on capital, so that the total annual cost per unit would drop with building age. Elevator buildings are typically assessed at higher values than walkups, and this difference is reflected in real estate taxes and allowances for return on capital.

Our estimates, therefore, reflect the central tendency of a universe of buildings which is less than rigorously defined but which seems in most respects to be the appropriate universe for our purposes. The schedule of total costs by size of apartment shown in Table E-6 may be interpreted as the annual contract rents needed to support typical apartments in this universe in 1966. In the table below, we divide these entries by 12 to get equivalent monthly contract rents, and add an allowance for tenant-paid utilities to get equivalent monthly gross rent.

Number of Rooms	Annual Contract Rent	Monthly Contract Rent	Gas and Electricity ^a	Monthly Gross Rent
2	\$1,058	\$ 88.17	\$ 8.94	\$ 97.11
3	1,209	100.75	10.13	110.88
4	1,361	113.42	11.32	124.74
5	1,510	125.83	12.51	138.34
6	1,661	138.42	13.70	152.12

^a Based on typical cost of \$6.56 + \$1.19 per room. See Appendix C.

These monthly gross rent equivalents are shown in Table E-7, rounded to the nearest dollar. There, we compare them to actual gross rents reported by the Housing and Vacancy Survey in the spring of 1968—i.e., a little more than a year later than the somewhat ambiguous reference date of our cost information. For this comparison, we have selected only apartments with cooking equipment and all plumbing facilities, located in sound buildings originally designed for multifamily occupancy; we have excluded units in apartment hotels, buildings converted to apartment use, and one- or two-family houses. The entries shown are median gross rents for units of each size. For controlled housing, we show only City-wide medians inasmuch as ceiling rents do not vary much by borough; for uncontrolled housing, we show separate medians for Brooklyn, the Bronx, Queens, and Manhattan, with the boroughs arranged in ascending order of rent levels.

Our “full-cost” rents fall about halfway between the City-wide median controlled rents and median uncontrolled rents in Brooklyn, the borough where uncontrolled rents are lowest. Uncontrolled rents in the Bronx and Queens are slightly higher than those in Brooklyn; uncontrolled rents in Manhattan are about double our full-cost rents.

These relative rent levels seem reasonable. It is certainly clear that the ceiling rents of buildings in our sample of hardship applicants were both typical of those in the sound, fully equipped, rent-controlled stock and well below the entries shown in the “full cost” column. Rents on uncontrolled units are higher than our “full cost” because uncontrolled units are newer and of generally higher quality. Almost all were built between 1947 and 1968, averaging perhaps 10 years of age at the time of the Housing and Vacancy Survey; our typical hardship building was 38 years of age at the time its owner applied for a rent increase.

In the bottom half of Table E-7, the median rents for each category of apartments have been converted to index form, showing the relative increase in median rents with number of rooms. In general, the higher the basic rent for a two-room apartment, the greater the relative increase for a larger apartment. In the controlled stock, City-wide, a six-room apartment typically rents for a third more than a two-room apartment; in Brooklyn’s uncontrolled stock, rents increase by two-thirds, and in the Bronx by three-fourths, going from two to six rooms; in Queens,

a six-room apartment commands more than twice the rent of a two-room apartment; in Manhattan, the median gross rent on a six-room apartment was so high it escaped our tabulation scheme.¹⁰ Here again, our full-cost rents fall between City-wide controlled and Brooklyn uncontrolled apartments. Our cost data thus suggest that, while most controlled apartments in 1968 were underpriced by our standard, the larger controlled apartments were worse off than the smaller ones. (Table 35 in Ch. VI shows that relationship more clearly than Table E-7, expressing our full-cost rent for each size of apartment as a multiple of the median rent of controlled apartments of that size.)

¹⁰ We should note that six-room uncontrolled apartments meeting our other specifications were rare in every borough. Our tabulations showed only 2,057 in Brooklyn, 1,394 in the Bronx, 2,652 in Queens, and 3,138 in Manhattan. These are estimates based on a stratified sample whose overall sampling rate was about 1 percent, so that estimates of median values in these cases are not statistically very reliable; but the pattern of relative rents by apartment size is nonetheless clear from these data.

Table E-1

RENT/INCOME STANDARDS GOVERNING HOUSING ASSISTANCE PROGRAMS:
NEW YORK CITY, 1969

Housing Assistance Program	Income Limits for Admission to Program		Income Definition (Adjustments to Gross Income)	Explicit or Implicit Minimum Rent/Income Ratios ^a
	Statutory	Administrative		
Limited profit housing companies: parallel State and City programs (Mitchell-Lama)	<u>Minimum:</u> None. <u>Maximum:</u> Varies with family size and scheduled rents as follows: 1-3 persons .. 6 x annual rent 4+ persons ... 7 x annual rent	<u>Minimum:</u> 4 x annual rent (excluding utilities). <u>Maximum:</u> As set by statute. Averages in 1969 were: 1 person \$ 6,700 2 persons 8,930 3 persons 10,400 4 persons 14,930 5+ persons ... 16,930 <u>Set by:</u> NYS Division of Housing and Community Renewal or NYC Housing and Development Administration.	Total household income minus: (a) All income of each minor who is a full-time student (up to \$1,500 in State-sponsored projects). (b) Up to \$1,500 of earnings of each secondary wage earner. (c) In co-ops, some allowance for replacement and re-turn on equity.	1-3 persons 17 4+ persons 14
Limited dividend housing companies: joint State and City program.	<u>Minimum:</u> None. <u>Maximum:</u> None.	<u>Minimum:</u> Same as Mitchell-Lama program. <u>Maximum:</u> For projects built before 1955: 1-3 persons 7 x annual rent 4+ persons 8 x annual rent For projects built after 1955, same as Mitchell-Lama program. <u>Set by:</u> NYS Division of Housing and Community Renewal.	Same as Mitchell-Lama program. Projects built before 1955: 1-3 persons 14 4+ persons 13 Projects built after 1955: 1-3 persons 17 4+ persons 14	
Private redevelopment housing companies: joint State and City program.	<u>Minimum:</u> None. <u>Maximum:</u> None.	<u>Minimum:</u> Reasonable ability to pay scheduled rents. <u>Maximum:</u> Early projects had none. Subsequently, a maximum of 8 x annual rent for all family sizes. Most recently Mitchell-Lama maxima have been used. <u>Set by:</u> NYC Housing and Development Administration	For 8 x annual rent: income of chief wage earner and spouse (income of other family members excluded). For Mitchell-Lama limits: see above, Mitchell-Lama.	Depending upon age of project: (a) None. (b) All family sizes .13 (c) 1-3 persons 17 4+ persons 14
Low-rent assistance for Mitchell-Lama tenants: State program.	<u>Minimum:</u> None. <u>Maximum:</u> 5 x annual rent. <u>Set by:</u> State Legislature.	<u>Minimum:</u> \$1,080 x number of rooms. <u>Maximum:</u> For continued occupancy, 5 x annual rent of most expensive unit of same size in project. Admission limit set by statute. <u>Set by:</u> NYS Low-Rent Assistance Bureau.	Same as Mitchell-Lama program, minus: (d) \$900 for each retired person.	All family sizes 20

See footnotes at end of table.

Table E-1—continued

Housing Assistance Program	Income Limits for Admission to Program		Income Definition (Adjustments to Gross Income)	Explicit or Implicit Minimum Rent/Income Ratios ^a
	Statutory	Administrative		
Interest rate subsidy: Federal program (Sec. 221 (d)(3) BMIR).	Minimum and Maximum: To be set by HUD in consultation with local officials.	Minimum: Reasonable ability to pay scheduled rents after subsidy of \$30 to \$40 per unit. Maximum: Generally, 140-155% of Federal public housing maximum. In 1969: 1 person \$ 7,150 2 persons 8,650 3-4 persons 10,200 5-6 persons 11,750 7+ persons 13,250 Set by: Federal Housing Adminis- tration and NYC Housing and De- velopment Administration.	Total household income minus: (a) 5% for Social Security payments, union dues, etc. (b) \$300 for each minor. (c) All earnings of each minor.	All family sizes 19
Interest rate subsidy: Federal program (Sec. 236).	Minimum: None. Maximum: Generally, 135% of Federal public housing maxi- mum. Up to 20% of funds for projects with income limits above this level but below 90% of Sec. 221 (d)(3) maxi- mum.	Minimum: Reasonable ability to pay scheduled rents after subsidy of \$50 to \$60 per unit. Maximum: Determined by current schedule of Federal public housing and Sec. 221(d)(3) rents: 135% Public 90% Housing 221(d)(3) 1 person \$ 5,250 \$ 6,435 2 persons 7,096 7,785 3-4 persons 7,776 9,180 5-6 persons 10,093 10,575 7+ persons 10,660 11,925 Set by: Federal Housing Adminis- tration and NYC Housing and De- velopment Administration.	Same as interest rate sub- sidy program (Sec. 221(d) (3) BMIR).	All family sizes 25
Rent supplements: Federal program (Title I).	Minimum: None. Maximum: Generally, Federal public housing maxima.	Minimum: Reasonable ability to pay scheduled rents after supple- ment. Maximum: In 1969: 1 person \$4,320 2 persons 5,472 3 persons 6,366 5+ persons 7,500 Set by: Federal Housing Adminis- tration and NYC Housing and De- velopment Administration.	Same as interest rate sub- sidy program (Sec. 221(d) (3) BMIR).	All family sizes 25

See footnotes at end of table.

Table E-1—continued

Housing Assistance Program	Income Limits for Admission to Program		Income Definition (Adjustments to Gross Income)	Explicit or Implicit Minimum Rent/Income Ratios ^a
	Statutory	Administrative		
Public housing and leased public housing: Federal program.	Minimum and Maximum: To be set by local public housing agency, taking into account: (a) Family size, composition, age, and other factors affecting rent-paying ability. (b) Economic factors affecting financial stability and solvency of project. Set by: U.S. Congress.	Minimum: Reasonable ability to pay scheduled rents. Maximum: Varies with family size and project. Generally, 4 × "pre-vailing community rents." In 1969 typical limits were: 1-2 persons \$5,256 3-4 persons 5,760 5-6 persons 7,476 7+ persons 7,896 Set by: NYC Housing Authority.	Total household income minus: (a) Pension costs. (b) Social Security payments. (c) Union dues. (d) Up to \$1,500 of earnings of each minor. (e) Up to \$1,500 of earnings of each secondary wage earner. (f) Up to \$900 for others receiving Social Security or pensions.	Varies with family size and scheduled rents. Average minimum ratios are: 1 person 13 2 persons 14 3 persons 17 4 persons 17 5 persons 15 6 persons 15 7+ persons 15
Public housing: State program.	Minimum: None. Maximum: Varies with family size and scheduled rents as follows: 1-4 persons . 6 × annual rent 5+ persons .. 7 × annual rent Set by: State Legislature.	Minimum: Reasonable ability to pay scheduled rents. Maximum: As set by statute. Ranges in 1969 were: 1-2 persons \$5,256-6,192 3-4 persons 5,760-7,272 5-6 persons 7,476-8,208 7+ persons 7,896-8,208 Set by: NYC Housing Authority.	Same as Federal public housing program.	1-4 persons 17 5+ persons 14
Public housing: City program.	Minimum and Maximum: Same as State public housing program. Set by: City Council.	Minimum: Reasonable ability to pay scheduled rents. Maximum: As set by statute. Ranges in 1969 were: 1-2 persons \$5,256-6,516 3-4 persons 5,760-8,316 5-6 persons 7,476-9,036 7 persons 7,896-9,036 Set by: NYC Housing Authority.	Same as Federal public housing program.	1-4 persons 17 5+ persons 14
Public assistance rent allowances: joint Federal, State, and City program.	Minimum: None. Maximum: Varies with family size and composition. Set by: State Legislature.	Minimum: None. Maximum: Upper quartile limits in 1969 were: 1-2 persons \$1,890-2,440 3-4 persons 3,160-3,810 5 persons 4,430 6+ persons 6,200 Set by: NYC Department of Social Services.	All family income.	None. Rent allowance not functionally related to income. In 1969 the median ratio was greater than .35.

SOURCES: Public laws, published administrative regulations, and discussions with staffs of cognizant agencies.

^aRatio of annual contract rent paid by tenant to adjusted gross income. In some cases, contract rent includes utilities. These minima are not also maxima, nor are they necessarily typical of program participants.

Table E-2

COMMUNITY COUNCIL HOUSING STANDARDS: SPACE, EQUIPMENT,
QUALITY, AND COMMUNITY FACILITIES

Space Requirements

1. Generally no more than two persons per bedroom (except very young children); a separate bedroom for parents (may be shared by a child under one); separate bedrooms for other adults and for older children of each sex.
2. Kitchen.
3. Living room.
4. Bathroom within the dwelling unit.
5. Cupboard space for storing dishes, food, and household supplies.
6. Closet space for clothing.

Basic Equipment and Facilities

1. Stove with oven in kitchen (furnished by landlord).
2. Sink with running hot and cold water in kitchen.
3. Mechanical refrigerator in kitchen (furnished by landlord).
4. Washbowl, toilet, and bathtub or shower with running hot and cold water in bathroom.
5. Facilities for washing and drying clothes within the dwelling unit or within the building.
6. Electricity for lighting and gas or electricity for cooking.
7. Central heating.

Structural Requirements, Safety, Sanitation

1. Dwelling in conformity with the requirements of the Multiple Dwelling Law and the Sanitary Code in order to give protection against the elements and the hazards of fire.
2. A window in every room opening on a street, yard, or court.
3. No occupancy of a cellar, nor of a basement with floor more than 3 feet below the surrounding ground.
4. Adequate lighting in public hallways.
5. Building and surrounding ground clean and free from rubbish and litter.
6. Dwelling kept free of vermin, rodents, and other pests.
7. Adequate facilities for the disposal of garbage.

Accessibility to Community Facilities

1. Schools.
2. Playground or other safe outdoor play space for children.
3. Markets and shops; food stores within walking distance.
4. Public transportation.
5. Churches.
6. Recreational centers.

SOURCE: Community Council of Greater New York, *A Family Budget Standard*, 1963, p.33; adapted from Committee on the Hygiene of Housing, American Public Health Association, Inc., *Basic Principles of Healthful Housing*, Second Edition, 1950.

Table E-3

SUMMARY OF PHYSICAL AND FINANCIAL CHARACTERISTICS OF 311 BUILDINGS
GRANTED HARDSHIP RENT INCREASES IN 1966 AND 1967

Item	Mean ^a	Standard Deviation ^a	Range	
			Minimum	Maximum
<i>Physical Characteristics</i>				
Number of rooms	192.4	157.4	11	1,962
Number of units	56.2	46.2	2	550
Average rooms per unit	3.55	.74	1.67	6.73
Elevator (1) or walkup (0)	.695	.461	0	1
Year of construction	1928	11.5	1874	1947
Building age at filing date	38.1	11.6	18	93
<i>Capital Value per Unit</i>				
Assessed value at filing date	\$5,206	\$1,341	\$1,640	\$ 9,615
Estimated market value ^b	7,653	1,971	2,411	14,135
<i>Income and Expenses per Unit</i>				
Income for test year ^c	\$1,037	208	469	1,782
Rental income ^c	1,032	205	469	1,782
Other income	5	10	0	133
Expenses for test year	679	118	414	1,192
Maintenance and operations	426	91	245	803
Real estate taxes	253	66	82	482
Net operating income, test year ^c	358	142	−81	744
<i>Components of M&O Expense per Unit</i>				
Payroll	99	31	32	196
Fuel ^d	65	28	35	195
Utilities ^e	41	14	17	156
Repairs and maintenance	98	36	0	269
Replacements and improvements ^f	37	35	−1	150
Management	48	11	20	89
Insurance	31	11	0	89
Miscellaneous	8	5	0	36

SOURCE: Tabulations by NYCRI of data furnished by the Office of Rent Control, HDA.

NOTE: These 311 buildings are not intended to be a representative sample of "hardship" applicants; selection criteria are explained in the text. Filing dates range from 1965 to 1967; test years for income and expenses were usually the preceding 12 months. Distributions of mean values may not add exactly to totals because of rounding; other distributions are not additive.

^a Each building weighted equally.

^b Assessed value $\times$ 1.47. See text for explanation.

^c Assumes full occupancy and no collection losses.

^d Normally includes fuel for central heating of individual apartments.

^e Normally excludes cooking gas and electricity metered to individual apartments. Normally includes water and sewage charges.

^f Amortized over useful life.

Table E-4
MEAN VALUES^a OF PHYSICAL AND FINANCIAL CHARACTERISTICS OF 311 BUILDINGS
GRANTED HARDSHIP RENT INCREASES IN 1966 AND 1967, BY LOCATION

	Lower Manhattan (17 Bldgs)	Upper Manhattan (44 Bldgs)	Queens (47 Bldgs)	Brooklyn (90 Bldgs)	Bronx (113 Bldgs)
<i>Physical Characteristics</i>					
Number of rooms	106.6	163.0	256.5	194.4	188.4
Number of units	27.0	43.6	79.6	58.4	54.0
Average rooms per unit	4.11	4.00	3.24	3.37	3.57
Elevator (1) or walkup (0)	.29	.57	.77	.86	.65
Year of construction	1906	1918	1930	1934	1929
Building age at filing date	60.5	47.6	35.7	32.4	36.7
<i>Capital Value per Unit</i>					
Assessed value at filing date	\$4,744	\$4,677	\$5,096	\$5,641	\$5,182
Estimated market value ^b	6,973	6,875	7,491	8,292	7,618
<i>Income and Expenses per Unit</i>					
Income for test year ^c	\$996	\$979	\$1,026	\$1,080	\$1,035
Rental income ^c	995	976	1,021	1,075	1,030
Other income	1	3	5	5	6
Expenses for test year	732	701	642	663	690
Maintenance and operations	502	473	396	388	440
Real estate taxes	230	228	246	275	250
Net operating income, test year ^c	264	278	383	417	346
<i>Components of M&O Expense per Unit</i>					
Payroll	97	105	92	90	107
Fuel ^d	98	78	59	59	63
Utilities ^e	45	43	41	40	39
Repairs and maintenance	128	119	87	82	102
Replacements and improvements ^f	44	46	34	24	44
Management	46	45	47	52	47
Insurance	35	30	28	34	31
Miscellaneous	8	7	7	9	7

SOURCE: Tabulations by NYCRI of data furnished by the Office of Rent Control, HDA.

NOTE: These 311 buildings are not intended to be a representative sample of "hardship" applicants; selection criteria are explained in the text. Filing dates range from 1965 to 1967; test years for income and expenses were usually the preceding 12 months. Distributions of mean values may not add exactly to totals because of rounding; other distributions are not additive.

^a Each building weighted equally.

^b Assessed value $\times$ 1.47. See text for explanation.

^c Assumes full occupancy and no collection losses.

^d Normally includes fuel for central heating of individual apartments.

^e Normally excludes cooking gas and electricity metered to individual apartments. Normally includes water and sewage charges.

^f Amortized over useful life.

Table E-5

ESTIMATES OF TYPICAL FULL COSTS FOR APARTMENTS OF TWO TO SIX ROOMS,
 ASSUMING EXISTING PATTERN OF ASSESSED VALUE:
 SELECTED "HARDSHIP" BUILDINGS, 1966-1967

Number of Rooms	Annual Cost per Unit for Typical Building ^a				Percentage Distribution by Component			
	M&O	Real Estate Taxes ^b	Return on Capital ^b	Total	M&O	Real Estate Taxes	Return on Capital	Total
2	\$349	\$228	\$552	\$1,129	30.9	20.2	48.9	100.0
3	399	244	590	1,233	32.4	19.8	47.8	100.0
4	449	260	629	1,338	33.6	19.4	47.0	100.0
5	498	275	665	1,438	34.6	19.1	46.3	100.0
6	548	291	704	1,543	35.5	18.9	45.6	100.0
3.5 ^c	426	253	612	1,291	33.0	19.6	47.4	100.0

SOURCE: Analysis by NYCRI of data furnished by the Office of Rent Control.

NOTE: Based on data for a selected set of 311 buildings granted hardship rent increases in 1966 and 1967. See Tables E-3 and E-4 for description of buildings; see text for derivation of cost schedules. Distributions may

not add exactly to totals because of rounding.

^a Structure containing 56 units, built in 1928, free of housing code violations.

^b Weighted average of elevator buildings and walk-ups.

^c Average unit size for 311 buildings.

Table E-6

ESTIMATES OF TYPICAL FULL COSTS FOR APARTMENTS OF TWO TO SIX ROOMS,
 ASSUMING ADJUSTED PATTERN OF ASSESSED VALUE:
 SELECTED "HARDSHIP" BUILDINGS, 1966-1967

Number of Rooms	Annual Cost per Unit for Typical Building ^a				Percentage Distribution by Component			
	M&O	Real Estate Taxes ^b	Return on Capital ^b	Total	M&O	Real Estate Taxes	Return on Capital	Total
2	\$349	\$207	\$502	\$1,058	33.0	19.6	47.4	100.0
3	399	237	573	1,209	33.0	19.6	47.4	100.0
4	449	267	645	1,361	33.0	19.6	47.4	100.0
5	498	296	716	1,510	33.0	19.6	47.4	100.0
6	548	326	787	1,661	33.0	19.6	47.4	100.0
3.5 ^c	426	253	612	1,291	33.0	19.6	47.4	100.0

SOURCE: Analysis by NYCRI of data furnished by the Office of Rent Control.

NOTE: Based on data for a selected set of 311 buildings granted hardship rent increases in 1966 and 1967. See Tables E-3 and E-4 for description of buildings; see text for derivation of cost schedules. Distributions may

not add exactly to totals because of rounding.

^a Structure containing 56 units, built in 1928, free of housing code violations.

^b Weighted average of elevator buildings and walk-ups.

^c Average unit size for 311 buildings.

Table E-7

COMPARISON OF "FULL-COST" GROSS RENTS IN 1966-1967 WITH MEDIAN
GROSS RENTS FOR SELECTED GROUPS OF CONTROLLED AND UNCONTROLLED
APARTMENTS IN 1968, BY SIZE OF UNIT

Number of Rooms	Controlled Units, 1968 ^a	"Full-Cost," 1966-1967 ^b	Uncontrolled Units, by Borough, 1968 ^a			
			Brooklyn	Bronx	Queens	Manhattan
2	\$ 83	\$ 97	\$114	\$121	\$122	\$182
3	89	111	144	150	147	219
4	94	125	171	176	173	284
5	98	138	183	216	219	315
6	110	152	191	215	245	>400
2	1.00	1.00	1.00	1.00	1.00	1.00
3	1.07	1.14	1.26	1.24	1.20	1.20
4	1.13	1.29	1.50	1.45	1.42	1.56
5	1.18	1.42	1.61	1.79	1.80	1.73
6	1.33	1.57	1.68	1.78	2.01	>2.20

SOURCE: Tables 30 and E-6 and tabulations by NYCRI of data from the Housing and Vacancy Survey of 1968.

NOTE: Estimates in the "Full-Cost" column are based on a fairly representative subset of the buildings included in the "Controlled Units" column, and are thus roughly comparable.

^a Units with cooking equipment and all plumbing facilities in sound structures originally designed for multi-family occupancy.

^b Estimated full costs, including tenant-paid gas and electricity, for apartments in the typical building of the "hardship" sample described in the text.

Appendix F

SUPPLEMENTARY DATA ON RENT ASSISTANCE FORMULAS

RENT ASSISTANCE UNDER THREE FEDERAL PROGRAMS

Tables F-1 and F-2 show the budgetary implications of three rent assistance programs for our standard four-person family, which we illustrated in Figs. 29 and 30, respectively. For each program, three income levels are considered—the median welfare allowance of \$3,500, the program's limit of eligibility, and our \$7,400 low-to-moderate budget. In no program is the maximum income for admission as high as \$7,400, but once admitted, a family could continue in the program even though its income rose above that amount. We have applied the programs' formulas to incomes of \$7,400 in order to examine the impact of the underlying principles of assistance at our low-to-moderate level of living. The tables differ only in the total amount of rent paid; Table F-1 deals with the "new" housing case (annual rent of \$2,400), while Table F-2 shows the "old" housing case (annual rent of \$1,600).

Under the leased public housing program, the limit of eligibility for a four-person family is \$5,756 after adjustments, set by the New York City Housing Authority which administers the program. The equivalent gross income, calculated by adding back in an allowance for social security payments and union dues, is \$6,060. The amount of rent to be paid by the tenant is also set by the NYCHA, which charges \$87 per month, excluding utilities, for a five-room apartment; from Table 34, we allow \$13 per month for utilities, which brings the rent payment to \$100 a month. That this is half of our annual rent of \$2,400 for new or rehabilitated housing in Table F-1 is not coincidental. Federal public housing rents are set on the principle that the tenant pays maintenance and operating costs and the government covers debt service; in New York City this averages over all projects to a 50-50 split. Since \$2,400 is not only the maximum but the expected market rental for housing units in this program, the 50-50 rule applied to this figure determines the tenant's rental payment no matter what his income is.

In the family budget computation in Table F-1 under leased public housing, we calculated taxes on gross income before assistance using 1967-1968 rates from the *Annual Price Survey* of the Community Council of Greater New York; we allowed \$650 for work expenses as per Table 38. To arrive at income available for other

consumption, we subtracted taxes and work-related expenses and total market rent from the sum, gross rent plus rent assistance. Of course, the same value for income available for other consumption is arrived at by subtracting taxes, work-related expenses, and the tenant's rent payment from his gross income before rent assistance.

In the rent supplements program, the income limit for admission for a four-person family, set by HDA and FHA, is \$6,336; as in the leased public housing program, this excludes social security payments and union dues and additionally allows a \$300 deduction for each child. The equivalent gross income for our standard family is \$7,300. The amount of rent paid by the tenant is 25 percent of adjusted gross income or 30 percent of the scheduled rent, whichever is larger.

No deductions from gross income are allowed under the HUD legislative proposal, intended as it was to simplify administrative procedures. The upper income limit for admission that we show is the median income in the community, \$6,500 for all New York City households as shown in Table B-5. However, as pointed out in Ch. VII, the proposal is unclear both with respect to the geographical universe to be considered and whether the median is to be specific to household or family size. The share of rent paid by the tenant is \$700 plus 25 percent of his gross income over \$3,500.

In Table F-2, all computations for the rent supplements program and HUD legislative proposal are parallel to those in Table F-1; only the total rent payment changes. Under the leased public housing program, the NYCHA scheduled rent (\$100 per month gross rent) is not used to determine the tenant's share because it applies to new housing whose market rent is \$200 per month; instead we applied the 50-50 principle to the hypothetical market rent of \$133 per month.

LOW-INCOME HOUSEHOLDS NOT RECEIVING RENT ASSISTANCE IN 1968

Table F-3 underlies all of our calculations of the numbers of renter households not receiving rent assistance in 1968 who might have required assistance under our criteria. It shows numbers of renter households in 1968 by \$1,000 income brackets by size of household, excluding those paying no cash rent, public housing tenants, and welfare recipients.

The table is derived from two sources which differed in data-gathering methods, definitions, and date, and it clearly shows this parentage. The basic distribution of renter households paying cash rent comes from the 1968 Housing and Vacancy Survey (essentially Appendix Table B-13, but carried to household sizes of eight or more persons).¹ From it we subtracted tenants of public housing, using data from the same survey.

The next step was to delete welfare recipients. Our distribution of welfare households is based on a tabulation by the Bureau of the Budget of the Department

¹ See Ch. III and Appendix B for a description of the methods used in obtaining the distribution.

of Social Services (DSS) records for 1969, showing the number of households containing welfare recipients, by number of recipients and their total income from DSS and other sources (Table 8 in Ch. III, expanded to eight or more persons). Three adjustments were made to this distribution before we meshed it with the 1968 Housing and Vacancy Survey data. First, welfare renters paying no cash rent, as reported by the Bureau of the Budget's tabulations, were subtracted. Next, to avoid "double-subtraction" of public housing tenants who were also receiving welfare assistance, we deleted such tenants from the welfare income distribution. Our counts of welfare clients in public housing were also taken from BOB tabulations; because their income distribution was not given, we deleted the appropriate number of households of each size proportionately over the income range. Finally, to place the remaining welfare distribution on as comparable a basis as possible with the Housing and Vacancy Survey, we multiplied each cell by .81, the caseload ratio of May 1968 to July 1969. No adjustment was made to the income distribution because the amounts of welfare allowances did not significantly change between these dates.

Finally, this reduced table of welfare households by income and household size was subtracted from the Housing and Vacancy Survey distribution, to obtain Table F-3. Among households of three to six persons, some suspiciously small cells resulted, and there are several negative entries in the columns for seven or more persons. Clearly, this derived distribution cannot withstand cell-by-cell inspection. Further manipulations might have improved its appearance, but we could not justify "smoothing" the distribution on the basis of data at hand.

Table F-4 (the backup for Fig. 31) shows the numbers of renter households of each size whose incomes fall beneath certain levels: median welfare allowances from Table 38; modified welfare budgets from Table F-5, below; the minimum full-time wage; and our low-to-moderate gross incomes from Table 38. For each selected income and family size, the number of households with incomes below that level was calculated from Table F-3, using linear interpolation within \$1,000 class intervals. Where interpolations had to be made within cells with negative entries, we used an inverse linear method to ensure increases in the numbers of households included at more inclusive income levels.

MATCHING RENT ASSISTANCE TO FAMILY BUDGETS

Table F-5 presents our proposed consumption budgets with rent and other assistance, as needed, for low-income households by household size. These were illustrated in Figs. 32-34. We show four levels of disposable income (income after taxes and work-related expenses have been deducted). The first is a modified welfare budget for the case where disposable income before assistance is zero. To the median welfare allowance in 1969 for nonhousing consumption, obtained from Table 38, we have added our full-cost rent from Table 36. The entire budget is made up of public contribution.

The second column shows households of each size whose disposable incomes are just sufficient to cover the welfare standard of nonhousing consumption; we have

allowed full rent assistance to bring their total consumption budgets up to the amounts shown in the first column for indigents. The public contribution, of course, is less by the amount of nonhousing consumption.

Families of one to four persons in this situation are unlikely to have substantial earnings from employment, since their disposable incomes are less than could be obtained by full-time employment at the minimum wage. (We have assumed throughout our calculations that families with gross incomes of less than \$3,200 do not work, i.e., they receive their incomes entirely from nonwage sources, and that these incomes are not taxable. For such households, gross income equals disposable income before assistance.) After assistance they are as well off as the welfare clients but do not reach the level of the minimum-wage earner. On the other hand, the disposable incomes shown in the second column for families with five or more persons are in excess of the amounts that could be obtained from full-time employment at the minimum wage, though some could have nonwage incomes of the amounts indicated.

The third column is constructed on the assumption that one person in the household is employed full time and receives the minimum wage of \$3,200. Disposable income before assistance is \$3,200 less taxes and work-related expenses, which works out to \$1,865 for one person, \$2,135 for two persons, \$2,265 for three, \$2,370 for four, and \$2,395 for five or more persons. Depending on household size, these families may or may not have disposable incomes large enough to cover the welfare level of nonhousing consumption. Families of one to four persons need only rent assistance, the amount of which was calculated using the formula discussed below. Families with five or more persons, however, require nonhousing assistance as well; full rent assistance does not raise their consumption budgets to the welfare level. In these instances, the amount of nonhousing assistance is simply the difference between the modified welfare budget and the sum of full rent assistance and disposable income before assistance.

In the fourth column, we show budgets for households with disposable incomes adequate to cover our low-to-moderate level of living, as shown in Table 36. At this level, by definition, no public contribution is needed.

A FORMULA FOR RENT ASSISTANCE

In Ch. VII, we proposed five principles to be used as guides in matching rent assistance to family budgets:

1. All households whose disposable incomes are inadequate to support a low-to-moderate level of living, including adequate housing, should be eligible for rent assistance.
2. A rent-assisted budget must allow for rent expenditures that cover the full costs of adequate housing.
3. A rent-assisted budget must allow at least the level of nonhousing con-

sumption acknowledged in welfare schedules as the publicly supported minimum.

4. Rent assistance should not operate so as to discourage those who can increase their incomes by productive employment from so doing.
5. The amounts of rent assistance granted should be a minimum consistent with the preceding four principles.

We also offered a formula for rent assistance that, we believe, satisfies the first four principles and conforms approximately to the fifth. Here, we repeat this formula and show that it meets our specifications.

The following terms, all measured in dollars, are defined for a household of specified size:

- R = full-cost gross rent for an apartment of appropriate size;
- C_1 = welfare budget for nonhousing consumption;
- C_2 = low-to-moderate budget for nonhousing consumption;
- $Y_1 = C_1 + R$ = disposable income needed to support a modified² welfare level of living;
- $Y_2 = C_2 + R$ = disposable income needed to support a low-to-moderate level of living;
- y = disposable income of the specified household before assistance; and
- a = amount of assistance granted.

Our formula, repeated from Ch. VII, is:

$$a = \left\{ \frac{Y_2 - y}{Y_2 - C_1} \right\} R, \quad \text{for } C_1 < y < Y_2, \quad (1)$$

The recipient's contribution toward the cost of his housing is then:

$$R - a = \left\{ \frac{y - C_1}{Y_2 - C_1} \right\} R. \quad (2)$$

Our first principle requires that a be greater than zero for all y less than Y_2 . Inspection of Eq. (1) shows that, for $y = Y_2$, the bracketed term is zero, so $a = 0$. For all $y < Y_2$, the bracketed term is positive, so $a > 0$. Thus, the formula conforms to the first principle.

The second and third principles, taken together, specify a minimum consumption budget for all rent-assisted households equal to our modified welfare level, Y_1 . At the same time, the maximum possible amount of rent assistance is R . Since $Y_1 = C_1 + R$, this condition can be satisfied only for $y > C_1$. When $y < C_1$, rent assistance alone will not suffice to meet the household's budgetary problems, and we

² The modification of existing welfare budgets consists in raising the gross rent allowance to an amount equal to R .

have proposed income maintenance for such cases. But for $y = C_1$, we can see by inspection of Eq. (1) that the bracketed term is unity and $a = R$.

We have now defined two extreme values in our rent assistance schedule. At the lowest disposable income at which rent assistance is an appropriate remedy, full rent assistance is granted. At the other end, when disposable income reaches the low-to-moderate level of living, no rent assistance is granted. In between these limiting values of y and a , the amount of rent assistance must be made to vary so that a decreases from R to 0 as y increases from C_1 to Y_2 .

This could be accomplished in various ways. Our fourth principle rules out many of the possibilities by requiring that any increase in y be no more than partially offset by the decrease in a . In other words, $-1 < da/dy < 0$. To test Eq. (1) against this constraint, we take the derivative of a and substitute for Y_2 as follows:

$$\frac{da}{dy} = - \frac{R}{Y_2 - C_1} = - \frac{R}{R + (C_2 - C_1)}. \quad (3)$$

Since C_2 is certainly larger than C_1 , the denominator is positive and greater than R ; consequently the derivative is negative, but greater than (-1) , as required.

Our fifth principle is strictly satisfied at only two points, $y = C_1$ and $y = Y_2$. In between, it cannot be strictly satisfied for two reasons. First, we do not know how closely we could approach $da/dy = -1$ without damaging the recipient's incentive to seek an increase in y . Second, our Eq. (1) is the only formula satisfying the first four conditions whose derivative is constant over the relevant range of y . If we chose a formula whose derivative was closer to (-1) over some part of the range of y , it would have to be further from (-1) over some other part of that range.

Two other properties of our rent assistance formula can be demonstrated by examining Eq. (2), which defines the recipient's contribution toward the cost of his housing. The first is obvious: as y increases, the recipient of a pays an increasing percentage of the cost of his housing. The second is less obvious: as y increases, the recipient of a has an increasing amount of income remaining for nonhousing consumption. This budget residual can be defined as $y + a - R$, whose derivative is:

$$\frac{d(y + a - R)}{dy} = \frac{dy}{dy} + \frac{da}{dy} = 1 + \frac{da}{dy}. \quad (4)$$

We have already shown by Eq. (3) that $-1 < da/dy < 0$, so $1 + da/dy$ must be greater than zero, and the budget residual increases as y increases.

Table F-1

RENT ASSISTANCE AND FAMILY BUDGET COMPUTATIONS FOR THREE FEDERAL PROGRAMS:
FOUR-PERSON FAMILIES IN HOUSING WHOSE MARKET RENTAL IS \$2,400 ANNUALLY

Computation by Program	Income of Four-Person Family		
	Welfare Level	Admission Limit	Low-Mod. Level
<i>Leased Public Housing</i>			
Rent Computation:			
Gross income before rent assistance	\$3,500	\$6,060	\$7,400
Adjusted gross income	3,325	5,756	7,030
Standard gross rent	2,400	2,400	2,400
Public share	1,200	1,200	1,200
Tenant share	1,200	1,200	1,200
Family Budget Computation:			
Gross income including rent assistance	4,700	7,260	8,600
Less: Taxes and work-related expenses	895	1,430	1,800
Disposable income	3,805	5,830	6,800
Less: Standard gross rent	2,400	2,400	2,400
Income available for other consumption	1,405	3,430	4,400
<i>Rent Supplements</i>			
Rent Computation:			
Gross income before rent assistance	\$3,500	\$7,300	\$7,400
Adjusted gross income	2,725	6,336	6,430
Standard gross rent	2,400	2,400	2,400
Public share	1,680	815	790
Tenant share	720	1,585	1,610
Family Budget Computation:			
Gross income including rent assistance	5,180	8,115	8,190
Less: Taxes and work-related expenses	895	1,740	1,800
Disposable income	4,285	6,375	6,390
Less: Standard gross rent	2,400	2,400	2,400
Income available for other consumption	1,885	3,975	3,990
<i>1970 HUD Legislative Proposal</i>			
Rent Computation:			
Gross income before rent assistance	\$3,500	\$6,500	\$7,400
Adjusted gross income	3,500	6,500	7,400
Standard gross rent	2,400	2,400	2,400
Public share	1,700	950	725
Tenant share	700	1,450	1,675
Family Budget Computation:			
Gross income including rent assistance	5,200	7,450	8,125
Less: Taxes and work-related expenses	895	1,590	1,800
Disposable income	4,305	5,860	6,325
Less: Standard gross rent	2,400	2,400	2,400
Income available for other consumption	1,905	3,460	3,925

SOURCES: Computations by NYCRI from data in Table E-1 (program standards), Table 36 (low-to-moderate incomes and work-related expenses), Table 38 (welfare incomes), and Community Council of Greater New York, *Annual Price Survey—Family Budget Costs, October 1967*, Eleventh Edition, 1968, Table 6 (tax liabilities).

NOTE: Adjustments to gross income before rent assistance are based on program rules. Taxes are computed on gross income before assistance.

Table F-2

RENT ASSISTANCE AND FAMILY BUDGET COMPUTATIONS FOR THREE FEDERAL PROGRAMS:
FOUR-PERSON FAMILIES IN HOUSING WHOSE MARKET RENTAL IS \$1,600 ANNUALLY

Computation by Program	Income of Four-Person Family		
	Welfare Level	Admission Limit	Low-Mod. Level
<i>Leased Public Housing</i>			
Rent Computation:			
Gross income before rent assistance	\$3,500	\$6,060	\$7,400
Adjusted gross income	3,325	5,756	7,030
Standard gross rent	1,600	1,600	1,600
Public share	800	800	800
Tenant share	800	800	800
Family Budget Computation:			
Gross income including rent assistance	4,300	6,860	8,200
Less: Taxes and work-related expenses	895	1,430	1,800
Disposable income	3,405	5,430	6,400
Less: Standard gross rent	1,600	1,600	1,600
Income available for other consumption	1,805	3,830	4,800
<i>Rent Supplements</i>			
Rent Computation:			
Gross income before rent assistance	\$3,500	\$7,300	\$7,400
Adjusted gross income	2,725	6,335	6,430
Standard gross rent	1,600	1,600	1,600
Public share	920	15	—
Tenant share	680	1,585	1,600
Family Budget Computation:			
Gross income including rent assistance	4,420	7,315	7,400
Less: Taxes and work-related expenses	895	1,740	1,800
Disposable income	3,525	5,575	5,600
Less: Standard gross rent	1,600	1,600	1,600
Income available for other consumption	1,925	3,975	4,000
<i>1970 HUD Legislative Proposal</i>			
Rent Computation:			
Gross income before rent assistance	\$3,500	\$6,500	\$7,400
Adjusted gross income	3,500	6,500	7,400
Standard gross rent	1,600	1,600	1,600
Public share	900	150	—
Tenant share	700	1,450	1,600
Family Budget Computation:			
Gross income including rent assistance	4,400	6,650	7,400
Less: Taxes and work-related expenses	895	1,590	1,800
Disposable income	3,505	5,060	5,600
Less: Standard gross rent	1,600	1,600	1,600
Income available for other consumption	1,905	3,460	4,000

SOURCES: Computations by NYCRI from data in Table E-1 (program standards), Table 36 (low-to-moderate incomes and work-related expenses), Table 38 (welfare incomes), and Community Council of Greater New York, *Annual Price Survey—Family Budget Costs, October 1967*, Eleventh Edition, 1968, Table 6 (tax liabilities).

NOTE: Adjustments to gross income before rent assistance are based on program rules. Taxes are computed on gross income before assistance.

Table F-3

NUMBER OF RENTER HOUSEHOLDS PAYING CASH RENT, EXCLUDING WELFARE RECIPIENTS AND
PUBLIC HOUSING TENANTS, BY INCOME IN 1967 DOLLARS, BY SIZE OF HOUSEHOLD:
NEW YORK CITY, 1968

Income in 1967 Dollars ^a	Thousands of Households, by Number of Persons per Household								Total
	1	2	3	4	5	6	7	8+	
Under 1,000	27.6	6.7	1.6	0.4	0.3	0.1	0.2	(b)	37.0
1,000-1,999	40.7	35.5	10.4	3.9	1.9	0.6	0.2	(b)	93.2
2,000-2,999	45.5	33.5	2.5	7.7	5.4	2.8	0.5	1.1	99.0
3,000-3,999	71.4	56.3	14.3	1.3	5.3	3.6	2.0	1.4	155.5
4,000-4,999	55.5	52.9	27.0	18.6	2.5	0.9	1.9	3.2	162.5
5,000-5,999	65.7	54.4	32.7	22.7	11.0	1.8	(-1.5)	2.1	189.1
6,000-6,999	46.2	55.2	29.9	18.2	12.5	4.9	1.1	(-1.1)	166.8
7,000-7,999	34.1	46.1	27.3	22.5	11.2	4.4	1.1	(-0.6)	146.3
8,000-8,999	27.0	39.9	24.8	20.9	9.2	4.9	1.1	0.4	128.4
9,000-9,999	13.8	30.4	19.2	15.5	6.9	3.9	0.8	0.3	91.0
10,000 or more	60.6	17.1	84.6	68.0	27.0	8.8	3.7	2.7	426.4
Total	488.3	581.9	274.4	199.8	93.2	36.6	11.2	9.6	1,695.0

SOURCES: Tabulations by NYCRI of data from the New York City Housing and Vacancy Survey of 1968; and unpublished tabulations by the Bureau of the Budget of records of the Department of Social Services, Human Resources Administration.

NOTE: See text for method used to exclude welfare recipients. Negative entries result from inconsistencies in the two data sources; individual cells in the vicinity of modal incomes of welfare households are also unreliable. Distributions may not add exactly to totals because of rounding.

^a Reported income for Calendar 1967 of the head of the household and household members related to the head.

^b Less than 500 households.

Table F-4

NUMBERS OF RENTER HOUSEHOLDS NOT RECEIVING RENT ASSISTANCE, WITH 1967 INCOMES
BELOW SELECTED LEVELS: NEW YORK CITY, 1968

Persons per Household	Selected Levels of Gross Annual Income				Thousands of Households with Incomes below Selected Levels			
	Median Welfare Budget	Modified Welfare Budget	Minimum Full-Time Wage	Low-Mod. Level of Living	Median Welfare Budget	Modified Welfare Budget	Minimum Full-Time Wage	Low-Mod. Level of Living
1	\$1,670	\$2,030	\$3,200	\$ 4,200	54.9	69.7	128.1	196.3
2	2,260	2,600	3,200	5,300	50.9	62.3	87.0	201.2
3	2,860	3,280	3,200	6,350	14.2	18.5	17.4	99.0
4	3,500	3,970	3,200	7,400	12.6	13.3	12.3	81.8
5	4,140	4,660	3,200	8,350	13.4	14.6	8.7	53.3
6	4,740	5,300	3,200	9,350	7.8	8.6	4.2	25.4
7	5,330	5,900	3,200	10,250	4.3	4.7	1.3	8.0
8+	6,460	6,880	3,200	11,200	7.3	6.8	1.4	8.0
All sizes					165.4	198.5	260.3	673.0

SOURCES: Table 38 and Appendix Table F-3.

NOTE: The household counts in this table exclude those receiving assistance from the Department of Social Services and all tenants of public housing projects, the two main categories of low-income households receiving rent assistance.

Table F-5

COMPUTATION OF PUBLIC CONTRIBUTIONS TO CONSUMPTION BUDGETS OF HOUSEHOLDS
AT SELECTED LEVELS OF DISPOSABLE INCOME, BY SIZE OF HOUSEHOLD:
NEW YORK CITY, 1968

Persons per Household	Item	Annual Amount (\$)			
		Modified Welfare Level ^a	Full-Rent Assistance ^b	Minimum Full-Time Wage ^c	Low-Mod. Level of Living ^d
1	Proposed consumption budget	2,030	2,030	2,365	2,600
	<i>Gross rent</i>	1,200	1,200	1,200	1,200
	<i>Other Goods and services</i>	830	830	1,165	1,400
	Disposable income before assistance	—	830	1,865	2,600
	Public contribution required	2,030	1,200	500	—
	<i>Rent assistance</i>	1,200	1,200	500	—
	<i>Other assistance</i>	830	—	—	—
2	Proposed consumption budget	2,600	2,600	3,005	3,750
	<i>Gross rent</i>	1,350	1,350	1,350	1,350
	<i>Other goods and services</i>	1,250	1,250	1,655	2,400
	Disposable income before assistance	—	1,250	2,135	3,750
	Public contribution required	2,600	1,350	870	—
	<i>Rent assistance</i>	1,350	1,350	870	—
	<i>Other assistance</i>	1,250	—	—	—
3	Proposed consumption budget	3,280	3,280	3,515	4,700
	<i>Gross rent</i>	1,500	1,500	1,500	1,500
	<i>Other goods and services</i>	1,780	1,780	2,015	3,200
	Disposable income before assistance	—	1,780	2,265	4,700
	Public contribution required	3,280	1,500	1,250	—
	<i>Rent assistance</i>	1,500	1,500	1,250	—
	<i>Other assistance</i>	1,780	—	—	—
4	Proposed consumption budget	3,970	3,970	3,970	5,600
	<i>Gross rent</i>	1,600	1,600	1,600	1,600
	<i>Other goods and services</i>	2,370	2,370	2,370	4,000
	Disposable income before assistance	—	2,370	2,370	5,600
	Public contribution required	3,970	1,600	1,600	—
	<i>Rent assistance</i>	1,600	1,600	1,600	—
	<i>Other assistance</i>	2,370	—	—	—
5	Proposed consumption budget	4,660	4,660	4,660	6,500
	<i>Gross rent</i>	1,700	1,700	1,700	1,700
	<i>Other goods and services</i>	2,960	2,960	2,960	4,800
	Disposable income before assistance	—	2,960	2,395	6,500
	Public contribution required	4,660	1,700	2,265	—
	<i>Rent assistance</i>	1,700	1,700	1,700	—
	<i>Other assistance</i>	2,960	—	565	—

For footnotes, see following page.

Table F-5—continued

Persons per Household	Item	Annual Amount (\$)			
		Modified Welfare Level ^a	Full-Rent Assistance ^b	Minimum Full-Time Wage ^c	Low-Mod. Level of Living ^d
6	Proposed consumption budget	5,300	5,300	5,300	7,400
	<i>Gross rent</i>	1,800	1,800	1,800	1,800
	<i>Other goods and services</i>	3,500	3,500	3,500	5,600
	Disposable income before assistance	—	3,500	2,395	7,400
	Public contribution required	5,300	1,800	2,905	—
	<i>Rent assistance</i>	1,800	1,800	1,800	—
	<i>Other assistance</i>	3,500	—	1,105	—
7	Proposed consumption budget	5,900	5,900	5,900	8,250
	<i>Gross rent</i>	1,850	1,850	1,850	1,850
	<i>Other goods and services</i>	4,050	4,050	4,050	6,400
	Disposable income before assistance	—	4,050	2,395	8,250
	Public contribution required	5,900	1,850	3,505	—
	<i>Rent assistance</i>	1,850	1,850	1,850	—
	<i>Other assistance</i>	4,050	—	1,655	—
8	Proposed consumption budget	6,880	6,880	6,880	9,100
	<i>Gross rent</i>	1,900	1,900	1,900	1,900
	<i>Other goods and services</i>	4,980	4,980	4,980	7,200
	Disposable income before assistance	—	4,980	2,395	9,100
	Public contribution required	6,880	1,900	4,485	—
	<i>Rent assistance</i>	1,900	1,900	1,900	—
	<i>Other assistance</i>	4,980	—	2,585	—

SOURCES: Computed by NYCRI from data in Table 36 and unpublished tabulations prepared by the Bureau of the Budget from records of the Department of Social Services, Human Resources Administration.

NOTE: All figures are rounded to the nearest \$5.

^a Median welfare allowance in 1969 for nonhousing consumption plus low-to-moderate gross rent allowance from Table 36. Computation assumes household with no outside income.

^b Disposable income before assistance adequate to cover median welfare allowance for nonhousing consumption; full rent assistance required to cover low-to-moderate gross rent.

^c Disposable income from earnings of one person employed at minimum wage of \$3,200. Deductions include income taxes, involuntary insurance, and work-related expenses.

^d Disposable income adequate to cover low-to-moderate consumption budget from Table 36; no assistance required.

Appendix G

SUPPLEMENTARY DATA ON THE COSTS OF COMPREHENSIVE RENT ASSISTANCE

ESTIMATING THE COSTS OF EXTENDING ASSISTANCE TO ALL LOW-INCOME HOUSEHOLDS

Tables 44, 45, and 46 presented our estimates of the public costs of extending rent assistance to all low-income households in the bench-mark year of 1968. Preparing these estimates presented several difficulties. One was the identification of renter households, by income and household size, not then aided by welfare or other housing assistance programs; our procedures for this step are documented in Appendix F ("Low Income Households Not Receiving Rent Assistance in 1968") and in Table F-3. A second difficulty was that our data for these households include only gross incomes, with no information as to the source of income or the employment status of the recipients, while our eligibility criteria and assistance formula are in terms of disposable income, i.e., income after deduction of work-related expenses and income tax liability, if any. Finally, there was a problem of interpolation within \$1,000 income brackets, both for purposes of establishing eligibility and for determining amounts of assistance due under the formula to households within the range of eligible incomes.

To cope with the second difficulty, that of relating gross to disposable income, we made two assumptions: (a) Households reporting gross incomes of \$3,200 or more were supported by full-time employment of one member, thus incurring work-related expenses, involuntary insurance, and, in some cases, income tax liabilities; \$3,200 is approximately equivalent to a full-time minimum wage. (b) Households reporting gross incomes below \$3,200 were supported entirely by nontaxable transfers, pensions, or savings, and had no work-related expenses. For these households, disposable income was equal to gross income.

These assumptions are obviously not literally true, and we have no clear idea how many households reporting incomes over \$3,200 were in fact pensioners, etc., nor how many reporting incomes under \$3,200 were employed part time or for part of the year. Note, however, that the population to which these assumptions were applied excludes welfare clients, so that the principal remaining forms of nontaxa-

ble income for unemployed persons would be pensions, social security, and unemployment compensation. One- and two-person households would clearly account for most of the recipients of pensions and social security payments, whether or not these exceeded \$3,200.

On the basis of these assumptions, we computed disposable incomes equivalent to gross incomes for those reporting gross incomes of \$3,200 or less. We thus distinguished two major groups of households: Group I, with disposable incomes below the amount of the welfare nonhousing consumption allowance for the appropriate household size, as given in Table F-5; and Group II, with disposable incomes greater than that allowance, but less than the full consumption budget for a low-to-moderate level of living, also shown in Table F-5. In order to achieve a welfare level of living, households in Group I would need not only full rent assistance, but additional public contributions to cover part of their nonhousing consumption budgets. The households of Group II would need at most full rent assistance to achieve this level of living; they are candidates for partial rent assistance as scheduled by our formula.

For purposes of estimating requirements for rent and other assistance, we thus distinguished four subsets of households:

Group I. Households with disposable incomes below the welfare nonhousing consumption allowance:

- A. Households with gross incomes equal to or exceeding \$3,200;
- B. Households with gross incomes less than \$3,200.

Group II. Households with disposable incomes greater than the welfare nonhousing consumption allowance but less than the low-to-moderate disposable income:

- A. Households with gross incomes equal to or exceeding \$3,200;
- B. Households with gross incomes less than \$3,200.

The numbers of households in Group I-A and the amounts of assistance required to enable them to afford our modified welfare budget are shown in Table G-1. These households are assumed to be supported by the earnings of one member, so that disposable income is less than gross income by at least the amount of work-related expenses. We first calculated the gross incomes needed by such households to yield disposable incomes equal to welfare allowances for nonhousing consumption. Only for households of five or more persons did these gross incomes equal or exceed \$3,200. For these, we interpolated in the appropriate income brackets of Table F-3 to estimate the numbers of households and their average gross incomes.

To estimate the amounts of rent and other assistance needed, we converted these average gross incomes for each household size to disposable incomes, which we subtracted from our modified welfare budget for the appropriate household size. In Table G-1, full rent assistance is used to make up these differences; where full rent

assistance is inadequate, the excess needed is assigned to assistance for "Other Consumption."

The numbers of households in Group I-B, those with disposable incomes under the welfare nonhousing consumption allowance and gross incomes less than the full-time minimum wage of \$3,200, are given in Table G-2. For these households, gross incomes were assumed to be equal to disposable incomes. For families with fewer than six persons, the welfare nonhousing consumption allowance is under \$3,200, so that allowance is the upper bound; for households with six or more persons, the welfare nonhousing allowance exceeds \$3,200; for them, the minimum wage is the upper limit. The numbers of households in Group I-B and the amounts of rent and other assistance they needed were estimated by the same methods used for Group I-A.

Groups I-A and I-B were then combined to form Table 44, i.e., by summing the household counts and total amounts needed, as shown in Tables G-1 and G-2; amounts needed per household were then recalculated from these totals.

As noted in Ch. VII, the allocation of public contributions between rent and other assistance is arbitrary. Table 44 provides full rent assistance plus whatever nonhousing assistance is needed to raise the recipient household to the modified welfare level of total consumption. In Table 45, public contributions and the recipient's outside income are both divided between rent and other consumption, so that public contributions account for the same fractions of rent allowances and other consumption allowances. The latter accounting convention (i.e., the estimates in Table 45) was used to carry forward the public costs of rent assistance to Table 48.

Households in Group II-A were also identified from Table F-3. They include all of those whose gross incomes were above \$3,200 but whose disposable incomes fell between the welfare nonhousing consumption allowance and the low-to-moderate total consumption budget. We found households of each size more or less evenly distributed within their respective income ranges, so we estimated rent assistance needs from the midpoint of each range, using our rent assistance formula. The household counts and amounts of assistance needed are shown in Table G-3.

The numbers of households in Group II-B, those reporting incomes that are less than \$3,200 and also between the welfare nonhousing consumption allowance and the low-to-moderate total consumption budget, are shown in Table G-4. Households of six or more persons are thus excluded from this category, since their welfare nonhousing consumption allowances exceed \$3,200. Only in the case of one-person households is the low-to-moderate consumption budget (\$2,600) less than the minimum wage. In this case, therefore, we exclude from rent assistance those one-person households with incomes between \$2,600 and \$3,200 who, we have assumed, have no work expenses.

As before, we estimated the numbers of households of each size in the appropriate income range from the distribution shown in Table F-3. For one-person households, the amount of rent assistance needed varies from full assistance to none; for larger households, it varies from full assistance to the amount our rent assistance formula allocates for disposable incomes of \$3,200. The midpoints of these ranges were used in the calculations of total amounts.

Groups II-A and II-B were then combined to form Table 46, i.e., by summing the household counts and total amounts needed as shown in Tables G-3 and G-4; amounts needed per household were then recalculated from these totals.

These procedures should account for all households in Table F-3 whose disposable incomes fell below the low-to-moderate total consumption budget. We also presented estimates of the numbers of these households in Table F-4. In the table below, we summarize our household counts from Tables G-1 to G-4, and compare them with those in Table F-4. The difference of 32,500 one-person households between the two accounts reflects our exclusion from rent assistance of one-person households whose reported gross incomes were between \$2,600 and \$3,200; assuming that these had no work-related expenses and paid no taxes, their incomes were adequate to support a low-to-moderate level of living.

Household Size	Group				Total	Table F-5 Total
	I-A	I-B	II-A	II-B		
1	—	22.9	68.2	72.7	163.8	196.3
2	—	15.6	114.2	71.4	201.2	201.2
3	—	9.7	81.6	7.7	99.0	99.0
4	—	7.1	69.5	5.1	81.7	81.8
5	3.1	7.4	41.5	1.3	53.3	53.3
6	3.2	4.2	18.0	—	25.4	25.4
7	3.4	1.3	3.3	—	8.0	8.0
8+	6.2	1.4	0.3	—	7.9	8.0
Total	15.9	69.6	396.6	158.2	640.3	673.0

COMPARISONS WITH EARLIER ESTIMATES

In Vol. I of this series, we presented some estimates of the need for rent assistance in New York City as of 1968, the same bench-mark year employed here.¹ Although the estimates in Vol. I are there described as "based on incompletely meshed data sources and crude program standards," they are different enough from those presented in Ch. VII and this appendix to require explanation.

The two sets of estimates are compared in Table G-5 with respect to case-loads, average amount of assistance proposed per case, and total public cost. They differ in all of these respects. With minor exceptions, the discrepancies result from the use of different standards for housing costs and for rent-paying ability. We will first discuss the minor discrepancies due to other causes, and then compare the standards employed for determining rent assistance needs.

¹ Ira S. Lowry (ed.), *Confronting the Crisis*, The New York City—Rand Institute, RM-6190-NYC, February 1970, pp. 34-37.

Households Aided in 1968

In Vol. I, we estimated that the 1968 welfare caseload included 269,000 households paying cash rent. We now think that this number is too large by nearly 30,000 households. The first estimate was based on misinformation concerning exclusions from the Bureau of the Budget's tabulations of DSS records for July 1969, which led us to underestimate growth in the caseload between May 1968 and July 1969. (It also led us to underestimate by 5,700 the number of welfare families living in public housing in 1968. See footnotes a and b to Table G-5.)

In Vol. I, we estimated that the average amount of rent assistance given by DSS to welfare households was \$796. This figure was based on contract rent expenditures by welfare clients reported in the Bureau of the Budget's tabulations, adjusted for the client's prorated contribution from outside income, a little less than 15 percent of the total. In Vol. II, we added an estimate of utility costs not included in contract rent, but allowed for by DSS in its budget calculations. After prorating client contributions from outside income, this raised our estimate of DSS's average contribution from \$796 to \$876 annually.

With respect to total DSS payments, the decrease in caseloads and the increase in assistance per case were nearly offsetting. In Vol. I, we estimated that payments amounted to \$214 million; in Vol. II, \$210.5 million.

In Vol. I, we included in existing programs only welfare households and public housing tenants, adjusted for double-counting of welfare families living in public housing. In Vol. II, for the sake of completeness, we added some 5,300 low-income households assisted under other housing assistance programs, as detailed in Table 43. This change accounts for the small differences in average public contributions per case and in total public contributions.

Households Not Aided in 1968

In Vol. I, we estimated both the numbers of households in need of assistance and the amounts they needed from three parameters: (1) a space standard of one room plus one room per person up to five persons, with an additional room for the seventh and ninth persons; (2) a gross rent standard of \$25 per room; (3) an ability-to-pay criterion of 25 percent of gross income for all households.

Subsequent work on housing costs and household budgets led us to revise these standards. In Vol. II, we adopted a slightly less generous space standard, one room plus one room per person up to four persons, with an additional room for the sixth and eighth persons. More importantly, we increased the gross rent standard to \$69 plus \$14 per room. Finally, we smoothed these allowances over the range of household sizes. These changes, taken together, yield the results shown in the table below, as compared with the standards used in Vol. I.

In other words, our estimates in Vol. II are based on much more generous rent allowances for small households. When the Vol. I estimates were prepared, our estimates of housing costs were based on building-wide averages per room, an approach for which there were many precedents. Subsequently, we acquired and

Persons per Household	Annual Gross Rent		
	Preliminary \$25/Room	Revised	
		\$69 + \$14/Room	Smoothed
1	\$ 600	\$1,165	\$1,200
2	900	1,330	1,350
3	1,200	1,495	1,500
4	1,500	1,660	1,600
5	1,800	1,660	1,700
6	1,800	1,825	1,800
7	2,100	1,825	1,850
8	2,100	1,990	1,900

analyzed data that led us to the conclusion that there were substantial overhead costs for each apartment, regardless of its size.² Since over half the households in our low-income universe consisted of one or two persons, the upward revision of standard rents for small households resulted in radical increases in our estimates both of the number who needed assistance and of the amounts they needed.

In Vol. I, we also accepted a widely used rule of thumb regarding ability to pay—i.e., that all households could afford to spend 25 percent of their gross income for housing. The budget analysis reported in Ch. VI of the present volume reveals serious shortcomings to this rule as it affects households whose incomes are derived from different sources (some taxable, some nontaxable) and whose employment status varies (those with employed members may have substantial work-related expenses). The formula we constructed to circumvent these inequities is more generous than the rule of thumb to most households with very low incomes, and to most large households. This change also had the effect of increasing the number of eligible households.

These changes are reflected in three rows of Table G-5. First we reestimated the amounts needed by households on welfare in 1968 to bring their rent-paying ability up to the new standard; the public cost was raised from \$70 million to \$89 million. Second, we distinguished nearly 86,000 households whose reported incomes were so low that they needed not only full rent assistance at an average cost of \$1,020, but other aid as well; total public cost of rent assistance for these families is estimated at nearly \$87 million. Third, we revised our estimates of the numbers of households eligible for partial rent assistance from 352,000 to 555,000; we increased the average amount of rent assistance needed from \$358 to \$642 and the total public cost from \$126 million to \$356 million.

Thus our estimates of the caseloads and costs of existing programs were only slightly revised. Our estimates of the incremental caseloads and costs associated with our proposal to extend rent assistance to all low-income households were radically changed: caseloads were increased by 82 percent and public costs by 252 percent.

² See "Variations in Cost with Size of Unit" in Appendix E.

The data on renter households in 1968, by income, used in the revised estimates, are not substantially different from those used in the preliminary estimates, although we followed slightly different procedures in accounting for households already assisted in 1968. The critical change was in program standards. We think that the preliminary standards were too crude; the revised standards are much more sensitive to differences in household situations and better reflect the pattern of housing supply costs by size of unit. But they still embody a large element of judgment about the levels of housing and other consumption that are worthy of public support. Here, we think, should be the focus of debate about the need for and costs of rent assistance.

Table G-1

NUMBERS OF HOUSEHOLDS IN GROUP I-A AND AMOUNTS OF RENT AND OTHER ASSISTANCE NEEDED:
NEW YORK CITY, 1968

Persons per Household ^b	Thousands of Households	Amount Needed					
		Per Household (\$) ^a			Total (\$ millions)		
		Rent Assistance	Other Consumption	Total	Rent Assistance ^a	Other Consumption	Total
5	3.1	1,700	280	1,980	5.1	0.9	6.1
6	3.2	1,800	550	2,350	5.8	1.8	7.5
7	3.4	1,850	830	2,675	6.3	2.8	9.1
8+	6.2	1,900	1,290	3,190	11.8	8.0	19.8
All sizes	15.9	1,824	849	2,673	29.0	13.5	42.5

SOURCES: Appendix Tables F-3 and F-5 and computations by NYCRI.

NOTE: Group I-A consists of renter households paying cash rent in 1968 and reporting gross incomes of \$3,200 or more whose disposable incomes, as estimated by NYCRI, were less than the median welfare allowance for nonhousing consumption for that size of household. Welfare recipients and public housing tenants are excluded. See text for estimating methods. Distributions may not add exactly to totals because of rounding.

^a Assumes full rent assistance; additional assistance needed for nonhousing consumption shown under "Other Consumption."

^b Group I-A does not include any households of fewer than five persons.

Table G-2

NUMBERS OF HOUSEHOLDS IN GROUP I-B AND AMOUNTS OF RENT AND OTHER ASSISTANCE NEEDED:
NEW YORK CITY, 1968

Persons per Household	Thousands of Households	Amount Needed					
		Per Household (\$) ^a			Total (\$ millions)		
		Rent Assistance	Other Consumption	Total	Rent Assistance ^a	Other Consumption	Total
1	22.9	1,200	415	1,615	27.5	9.5	37.0
2	15.6	1,350	625	1,975	21.1	9.8	30.8
3	9.7	1,500	890	2,390	14.6	8.6	23.2
4	7.1	1,600	1,185	2,785	11.4	8.4	20.0
5	7.4	1,700	1,480	3,180	12.6	11.0	23.5
6	4.2	1,800	1,900	3,700	7.6	8.0	15.5
7	1.3	1,850	2,450	4,300	2.4	3.2	5.6
8+	1.4	1,900	3,380	5,280	2.7	4.7	7.4
All sizes	69.6	1,435	908	2,342	99.9	63.2	163.0

SOURCES: Tables F-3 and F-5 and computations by NYCRI.

NOTE: Group I-B consists of renter households paying cash rent in 1968 and reporting gross incomes less than \$3,200 whose disposable incomes, as estimated by NYCRI, were less than the median welfare allowance for nonhousing consumption for that size of household. Welfare recipients and public housing tenants are excluded. See text for estimating methods. Distributions may not add exactly to totals because of rounding.

^a Assumes full rent assistance; additional assistance needed for nonhousing consumption shown under "Other Consumption."

Table G-3
NUMBERS OF HOUSEHOLDS IN GROUP II-A AND AMOUNTS OF
RENT ASSISTANCE NEEDED: NEW YORK CITY, 1968

Persons per Household	Thousands of Households	Amount Needed	
		Per Household (\$)	Total (\$ millions)
1	68.2	250	17.0
2	114.2	435	49.7
3	81.6	690	56.3
4	69.5	800	55.6
5	41.5	850	35.3
6	18.0	900	16.2
7	3.3	925	3.0
8+	0.3	950	2.8
All sizes	396.6	595	235.9

SOURCES: Tables F-3 and F-5 and computations by NYCRI.

NOTE: Group II-A consists of renter households paying cash rent in 1968 and reporting gross incomes of \$3,200 or more whose disposable incomes, as estimated by NYCRI, were greater than the median welfare allowance for nonhousing consumption but less than the low-to-moderate budget for total consumption for that size of household. Welfare recipients and public housing tenants are excluded. See text for estimating methods. Distributions may not add exactly to totals because of rounding.

Table G-4
NUMBERS OF HOUSEHOLDS IN GROUP II-B AND AMOUNTS OF
RENT ASSISTANCE NEEDED: NEW YORK CITY, 1968

Persons per Household ^a	Thousands of Households	Amount Needed	
		Per Household (\$)	Total (\$ millions)
1	72.7	600	43.6
2	71.4	825	58.9
3	7.7	1,135	8.7
4	5.1	1,395	7.1
5	1.3	1,640	2.1
All sizes	158.2	761	120.4

SOURCES: Tables F-3 and F-5 and computations by NYCRI.

NOTE: Group II-B consists of renter households paying cash rent in 1968 and reporting gross incomes less than \$3,200 whose disposable incomes, as estimated by NYCRI, were greater than the median welfare allowance for nonhousing consumption but less than the low-to-moderate budget for total consumption for that size of household. Welfare recipients and public housing tenants are excluded. See text for estimating methods. Distributions may not add exactly to totals because of rounding.

^a Group II-B does not include any households of more than five persons.

Table G-5

COMPARISON OF PRELIMINARY AND REVISED ESTIMATES OF RENT ASSISTANCE CASELOADS
AND PUBLIC COSTS: NEW YORK CITY, 1968

Type of Program	Thousands of Households Aided or Needing Aid		Amount Granted or Proposed per Case (\$)		Total Public Cost (\$ millions)	
	Preliminary	Revised	Preliminary	Revised	Preliminary	Revised
<i>Households Aided in 1968</i>						
By welfare rent assistance	269	240.3	796	876	214	210.5
By public housing and other	144	149.4	722	764	104	114.2
Subtotal	395 ^a	366.0 ^b	805	887	318	324.7
Proposed increase in rent assistance for welfare households	(156)	(216.6) ^b	450	410	70	88.7
Total	395	366.0	982	1,130	388	413.4
<i>Households Not Aided in 1968</i>						
Proposed for full rent assistance ^c	—	85.5	—	1,030	—	87.2
Proposed for partial rent assistance	352	554.8	358	642	126	356.3
Total	352	640.3	358	693	126	443.5
Total, all programs	747	1,006.4	688	851	514	856.9

SOURCES: *Rental Housing in New York City*, Vol. I, Table 3; Vol. II, Tables 42, 43, 47, and 48.

NOTE: Distributions may not add exactly to totals because of rounding.

^a Reduced by 18,000 to allow for welfare clients living in public housing.^b Reduced by 23,700 to allow for welfare clients living in public housing.^c And for varying amounts of nonhousing assistance, where needed.

